



amateur radio

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JANUARY
1966

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Perfect used Collins 12v. d.c. mobile supply and KWM-2 mounting bracket, £75. Collins noise blander, £25.

A BAND-SWITCHED ALL-TRIODE CONVERTER

GREG. JOHNSTON,* B.Sc.

HAVING always been somewhat of a "fiddler," and since my s.w.l. status does not allow me to fiddle effectively with other than receivers and receiver techniques, it is not surprising that we finally got to the stage of bread-boarding a receiver front end embodying circuitry which was once the acme of v.h.f. receiver technique in circuitry. It is stressed right from the start that my shack does not contain an abundance of test equipment for the noise generators and other such sophisticated pieces which makes the results obtained with the final article described very surprising (to me anyway!).

As the circuit will show, the r.f. stage finally settled on by trial and error is a 6ES8 non-neutralized series cascode¹ coupled into a second twin triode, this time a 12AT7, as a "Like New Mixer,"² while r.f. for conversion to the 3.5 Mc. i.f. is obtained from a 6C4 overtone crystal oscillator.

It is realized that the series cascade circuit has little advantage over a good pentode r.f. stage up to about 30 Mc. in terms of signal to noise ratio, however it is certainly less critical to adjust and is also less susceptible to cross modulation—a most important characteristic around my Amateur saturated QTH. In fact the 6ES8 offers a significant amount of extra usable gain when strong local signals would ride in on a pentode.

A neutralising coil between pins 1 and 8 may provide an instrument-detectable improvement in signal-to-noise ratio but is not used in my own case. A.v.c. can easily be applied to the first triode section if desired; it introduced no "bugs" here when applied. The circuit changes required are very minor and they may be useful in some situations. However, the author has found that without a.v.c. only the presence of local s.s.t. stations will block the converter—the i.f. a.v.c. handles the situation adequately in other cases.

Moving on to the mixer stage, the 12AT7 forms the real heart of this particular converter—the authors of reference 2 make many claims on its behalf—in this case just for a change they were so well based that even this author was able to verify them in practice after some initial troubles with excessive oscillator voltage which did produce many spurious responses. It was also found that even higher oscillator voltages led to complete blocking. Two points well worth watching.

The really notable operative feature of this circuit though is summed up by this quote from the reference article: "Its noise figure is so low that mixer noise simply disappears even with three i.f. stages following. The result is almost complete silence between stations, leading one to believe at first

that the circuit is a dud. Then, though, a fading long-hop signal will come through, moving almost instantly out of the no-signal region into clear audibility . . . As with the r.f. stage, this circuit is not prone to cross-modulation in all but the most severe of cases, while its cathode follower output is very overload-tolerant so that mixer distortion does not appear.

During the course of fiddling, many varieties of oscillator circuits have been tested, but basically due to lack of a good dial drive a crystal locked overtone circuit was finally employed.³

The high impedance converter output is taken off in the 3.5 Mc. range and fed to the tunable i.f. via a yard long co-ax. cable.

The coil data shown was drawn from reference 3 to standardise the coil former size—my own coils are wound on a variety of formers which were to hand. It will probably be found that the VK2JZ data for mixer coils will result in resonance slightly higher than the desired frequency due to the very low input capacity of the 12AT7. Treatment here is symptomatic—add a few extra turns and prune to the desired frequency.

Having gone this far, the results of a few empirical (i.e. no instrument) tests may be of interest. The most effective test of sensitivity was made by tuning the converter to 28 Mc., removing the antenna and replacing it with a 75 ohm resistor (i.e. equal to feed-line impedance), then rocking the slug of the r.f. stage through resonance with the result that the noise peaked as the slug resonated the r.f. coil. If you reckon your own receiver is sensitive on 10 mx, then try this test—it may be enlightening.

At this stage, having demonstrated to my own satisfaction at least, the very adequate sensitivity of the converter, an equally savage on-air test

¹ Mather, A. S., "A Broad Band, Bandswitched, Crystal-Locked Converter," "Amateur Radio," June 1963, p. 2-3.

of signal to noise ratio was arranged. The trial horse was a first class AR88 (not mine) which was tuned to a 40 mx signal—the converter was tuned to the same signal per a tunable oscillator it then sported. Even the owner of the AR88 freely admitted the superiority of the converter combination noise-wise—enough said.

A possible oscillator arrangement which, with adequate construction, care and compensation, would appeal to many would be to use a fixed i. f. of 3.5 Mc. and an oscillator range of 10.5-10.85 Mc. to tune 7.0-7.35 and 14.0-14.35 Mc., and 24.5-25.0 Mc. to tune 21.0-21.5 and 28.0-28.5 Mc. with appropriate r. f. and mixer coil switching. This idea was briefly employed initially but discarded for the reasons stated earlier.

In summary, it looks as though my urge to fiddle will be directed other than towards a new converter for some time hence. Meanwhile, I can sit back and read those S2 or S3 signals on 20 and 15 metres. Can you?

COIL DATA

All coils are wound on 7/16 inch diameter slug-tuned formers, with the r.f. primary (L1) spaced 1/16 inch from the secondary (L2).

| | | | | | | |
|----|-----|--------|--------|----|---------|---|
| 7 | Mc. | L1-7 | turns, | 32 | B. & S. | |
| | | 1.3-55 | " | " | " | " |
| | | 1.3-65 | " | " | " | " |
| | | 1.4-35 | " | " | " | " |
| 14 | Mc. | L1-4 | turns, | 32 | B. & S. | |
| | | 1.2-24 | " | " | " | " |
| | | 1.3-24 | " | " | " | " |
| | | 1.4-38 | " | " | " | " |
| 21 | Mc. | L1-4 | turns, | 32 | B. & S. | |
| | | 1.2-15 | " | 22 | " | " |
| | | 1.3-15 | " | " | " | " |
| | | 1.4-18 | " | 32 | " | " |
| 28 | Mc. | L1-4 | turns, | 32 | B. & S. | |
| | | 1.2-10 | " | 22 | " | " |
| | | 1.3-10 | " | " | " | " |
| | | 1.4-13 | " | 32 | " | " |

CIRCUIT NOTES

AVC1—Only needed with a.v.c. connected, otherwise L2 goes direct to pin 2.

XTAL2—Crystal Frequencies:

| | Fund. | Mult. |
|--------|-------|---------|
| 40 mx: | 5250 | kc. x 2 |
| 20 mx: | 5250 | kc. x 2 |
| 15 mx: | 5833 | kc. x 3 |
| 10 mx: | 8166 | kc. x 3 |

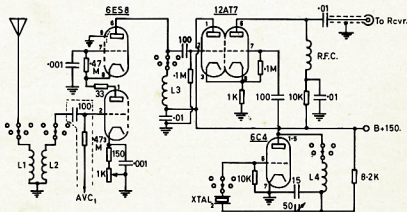


FIG. 1.

* 3 Inglis Street, Newtown, Hobart, Tasmania.

¹ Parsons, Warwick W., "The S-9'er Mark II," "Amateur Radio," November 1959, p. 7.

* Reprint from "73" Magazine, "Amateur Radio," June 1962, p. 4-5.

Single Package Transmitter for 160 and 2 Metres*

Developed by D. W. FURBY, G3EOH

THE design of the dual band transmitter to be described takes full advantage of the newly introduced power pentode type 7558. This valve, with an anode dissipation of 10 watts up to a maximum frequency of 175 Mc., may, from an Amateur point of view, be considered as an improved version of the popular 5763.

By an ingenious arrangement of the tuned circuits, no actual switching of the tuned circuits takes place when changing bands. As a result, not only is the efficiency of the various stages improved, especially at v.h.f., but in addition, construction is simplified.

The transmitter will run an input of 15 watts on 2 mx, but on 160 mx the input to the p.a. is restricted to 10 watts to meet the official power limitation in England.

Only the r.f. assembly is dealt with here since there are many published circuits of suitable modulators. An output of 8 watts will be adequate to modulate the carrier fully on 2 mx and have plenty of power in reserve for 160 mx.

CIRCUIT

Prior to examining the circuit (Fig. 1) in detail, it may be as well to review the functions of the individual valves in relation to the final frequencies. When operating on 1.8 Mc., V1 is not used, V2 functions as a Clapp variable frequency oscillator, V3 as a buffer amplifier, and V4 as the p.a. When operating on 144 Mc., V1 becomes a Colpitts crystal oscillator, V2 a frequency tripler, V3 a frequency doubler; V4 is of course the p.a.

As already mentioned, V1 only comes into operation when the transmitter is set for 144 Mc. The valve, a 6BW7, is

* Reprinted from R.S.G.B. "Bulletin," Sept. '68.

used in a familiar Colpitts configuration in which the crystal oscillates on its fundamental frequency in the grid/cathode circuit with the screen grid forming the "anode" by-passed to r.f. The true anode of the valve is tuned to one of the harmonics of the crystal, in this case the third, which, with an 8 Mc. crystal, provides drive to the following stage at 24 Mc.

It will be noted that the cathode of V1 is returned to the centre of a capacity divider between grid and earth, the values of which depart from those usually associated with this circuit. In addition, the d.c. return of the cathode of the valve is via a resistor which replaces the r.f. choke normally fitted.

Experience with this type of oscillator used to drive v.h.f. transmitters is that it has a natural tendency to make the final frequency lower than that which would be expected from the simple arithmetic of multiplying the crystal frequency by the frequency multiplication factor. In practice this means that the parallel capacity across the crystal, whether intentional or stray, must be kept well within the normal 30 pF. limit.

The foregoing observations are pertinent to this design since the effective capacity across the crystal given by C1 and C2 in series amounts to 60 pF. This will be further increased by circuit stray capacities. The effect will be to cause the final frequency to be substantially lower than that expected from simple calculations. If specific final frequencies are required, crystals will have to be ordered to operate with a parallel capacity of 70 pF. Alternatively, C1 should be reduced to the usual value of 30 pF. and C2 to 100 pF. If the circuit then fails to oscillate with a resistive cathode load, R2 will have to be replaced with an r.f. choke.

The output from V1 is, for 144 Mc. operation, coupled via S1 to V2. The entire bandchanging operation is accomplished by S1, no other switching being required.

When V2 is operating as a tripler, drive is applied to its grid via S1. It should be noted that the grid leak, R3, is not returned to earth in the usual manner, but is connected to the cathode of V2, and that the resistor in the cathode of V2 (R4) is not a bias resistor, but is associated with the function of this valve when it operates as a Clapp v.f.o. on 1.8 Mc. This resistor R4, does not have any degenerative effect when the valve operates as a multiplier since it is by-passed by C10 which forms part of the capacity divider of the v.f.o. circuit. Since R4 contributes no bias voltage to the valve, all the bias for the tripling operation is developed by the grid current through R3. If the drive fails, therefore, there could be a danger of the anode current of V2 running up to destruction levels. Since R4 in the cathode circuit is fairly large in value, the consequent voltage drop across this resistor under such conditions would automatically reduce the h.t. appearing across the valve and so limit the current. Nevertheless, V2 should not be operated without drive when switched to the 144 Mc. position.

The anode circuit of V2 when operating as a frequency multiplier is tuned to 72 Mc. The tuned circuit is unusual in that it is a pi-coupler, the shunt capacities of which are the output capacity of V2, and the input capacity of V3. Since the coil is resonated by these two capacities in series, the net capacity will be very small. This permits the use of a relatively large inductance, which, in itself, achieves broadband coverage so dispensing with the need for direct tuning. At this

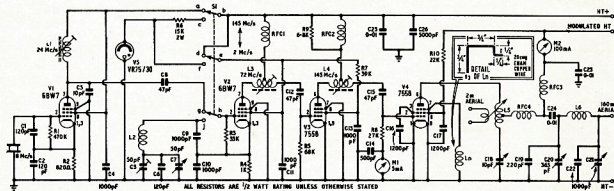


Fig. 1.—The circuit of the transmitter for operation on 160 and 2 metres.

L1-16 turns, 26 s.w.g. enamel, wound on Aladdin former 5961, with dust iron core.
L2-89 turns, 38 s.w.g. enamel, close wound on 1/2 in. former.
L3-21 turns, 16 turns tapped 10 turns from anode end, 26 s.w.g. enamel, wound on Aladdin former 5961, with brass core.

L4-6 1/2 turns, tapped 3 1/4 turns from anode end, 20 s.w.g. enamel, wound on Aladdin former 5961, with brass core.
L5-5 turns, tapped 2 1/2 turns from anode end, 20 s.w.g. enamel, 1/2 in. diam., 1/2 in. long, self supporting.

L6-36 turns, 18 s.w.g. enamel, 1 1/2 in. diam., 2 in. long.
RFC1, RFC2-220 mH., Cambion type 2082-10.
RFC3-2.5 mH.
RFC4-40 turns, 30 s.w.g. e.s.s., wound on Aladdin former 5961, no core.

junction it should be particularly noted that this coil L3 has a point of zero r.f. potential—namely the physical centre of the coil—and use is made of this as will be seen.

When the transmitter is switched for Top Band operation, S1 converts V2 into a Clapp variable frequency oscillator by connecting the grid to the tuned circuit, L2, C5, C6, C7, and the capacity divider C9, C10. In addition, the voltage regulator V5 is switched into circuit, and the screen supply for V2 connected to this instead of directly to the h.t. line. This stabilises the operation of the valve, and reduces the effect of variations in h.t. on the operation of the oscillator.

Mention has been made of the point of zero r.f. potential on L3. It is at this point that the h.t. is fed to V2 when it operates as a frequency multiplier, and the same point to which the load for the output of the v.f.o. is connected. The output load for the v.f.o. is RFC1. To the output frequencies of the v.f.o. L3 is just another piece of wire, and it has no effect upon the operation of the circuit. Thus the coupling capacitor C12 is effective for both frequencies.

V3 operates either as a frequency doubler, or as an untuned buffer.

For 144 Mc. operation, the output of V2 is coupled to V3 by a pi-network and C12, and V3 operates as a frequency doubler from 72 Mc. to 144 Mc. Like V2, V3 relies on grid current through its grid leak, R5, to give it the correct operating bias. The anode circuit of V3 consists of another pi-network similar to that in the anode of V2 except that it is tuned to 144 Mc.

When switched to Top Band operation, the screen grid of V3, which now operates as an untuned buffer amplifier, is connected to the stabilised supply instead of directly to the main h.t. Its output is thus reduced. Even with this procedure, the drive to the p.a. is still too high, and so a damping resistor is fitted across the r.f. choke anode load RFC2.

The p.a., V4, follows the practices established in the preceding stages. Grid current through the grid leak R8 provides the correct operating condition and a pi-network is used for the v.h.f. output, while the output circuit for Top Band is connected to the point of zero r.f. potential on this pi-network.

NOTES ON P.A.

There are one or two points which require special note in relation to the p.a.

First, since the valve is operated as a straight amplifier at v.h.f., it will require neutralising. In this circuit suppressor grid neutralisation is employed. This simply consists of an inductance connected in the suppressor earth return lead, and is shown in Fig. 1. While it would be possible to employ capacity neutralisation from the top of C18 back to the grid, the method shown is far easier to adjust and is more stable over a wider range of frequencies.

It must be particularly noted that two decoupling points are used on the screen grid of the p.a. valve. It is essential, if degeneration is to be avoided, that the screen grid has a low r.f. impedance to earth. To assist in

this, both of the pins of the valve to which the screen grid is connected are by-passed individually.

The v.h.f. tank circuit is a pi-network tuned in this case at its "far end" by a 10 pF. variable capacitor C18. To this coil is fitted a variable link from which the 144 Mc. output is taken.

To the centre of the v.h.f. pi-network is connected a v.h.f. choke, RFC4. Note that the point to which this choke is connected to the coil is not by-passed. This is correct and not an omission. It is bad practice to by-pass this point in any v.h.f. tank circuit, and in this case it would be disastrous, as it would "drain off" the Top Band output.

The Top Band output circuit is a familiar pi-network connected to the centre of the v.h.f. tank circuit via the blocking capacitor C24 and the v.h.f. choke RFC4.

Metering in the transmitter is limited to measuring the p.a. grid and anode currents, and this is quite adequate. Indeed, a single meter could be used suitably shunted and switched.

HEATER WIRING

The power rating and power requirements of this transmitter make it particularly suitable for mobile operation, in addition to fixed station usage. For this reason, heater wiring is not shown. When operated on 6.3v., the heaters of the valves should all be in parallel.

When operated from a 12v. nominal source, such as a car battery, V1 and

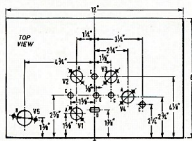
V2 should be wired in series, with pin 4 of V1 earthed, and pin 5 of V2 connected to the 12v. supply. Similarly, V3 and V4 should be wired in series with pin 5 of V4 earthed, and pin 4 of V3 to the supply. Pin 4 of V4 should be decoupled with a 5,000 pF. capacitor using very short leads. The two live leads from V2 and V4 are terminated on a 1,000 pF. feed-through capacitor, the far side of which provides an anchor point for the incoming heater supply.

CONSTRUCTION

The transmitter is laid out on a chassis measuring 12" x 8" x 2½" deep. In view of the difficulty of obtaining satisfactory earth connections to aluminium, this material should be avoided. Tinned steel or cadmium plated steel is far more satisfactory, or even sheet brass if one does not mind the somewhat higher cost. In actual fact, the size of the chassis specified is quite a bit larger than that needed for just the r.f. section, and sufficient room has been allowed to accommodate both a modulator and power supply.

Fig. 2(a) shows the drilling layout of the chassis, while Fig. 2(b) details the panel layout and the two screens needed in the construction shown in Fig. 2(c). It should be noted that these diagrams do not make provision for power supply or modulator components.

All components associated with the operation of the transmitter on 144 Mc. should have leads as short as possible. The position of components associated with operation on 1.8 Mc. is, on the other hand, relatively unimportant.



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MORE ABOUT MORSE

KENNETH L. GILLESPIE,* VK3GK

ANYONE can learn Morse. It needs only practice and the will to learn. It is a language of sounds like any other, but as the total number of these is in the order of forty plus, it is infinitely easier than French, German or—ugh—Latin.

Morse has been the greatest stumbling block ever to the full licence and looks like going on that way because of the difficulty in getting sufficient practice.

Practice is essential and the ideal is short periods, often, preferably several times a day, but at the very least, daily.

Apart from the good work done by the W.I.A. slow Morse sessions and a couple of individual Amateurs who transmit practice material, there does not seem to be much help about. Again the times of slow Morse transmissions may not always be convenient for many. There is a good W.I.A. tape service available but, then, not everyone has a tape machine so the would-be Morsees is left with trying to find something suitable on his receiver when he has a few moments to spare and usually ends up thoroughly disheartened because the commercials seem too fast.

There is no need to start running up the wall as there is one service that provides ideal learner practice, but you need to know where to find it and how to identify it when you hear it.

It is known as the Maritime Long Distance (H/F) Radio Telegraph Service and consists of bands of frequencies (most of them harmonically related) with a ship calling frequency, two small segments of ship working channels and a larger segment of coast station working frequencies. It is this latter we are interested in.

The service works like this. The coast stations and ships all listen to the calling frequency and when a ship wants to call a coast station he first listens to the station on its working frequency (which is always in use) and if he can hear it, calls on the calling frequency, and on establishing contact shifts to his own working frequency. For ship to ship they contact on the calling wave and shift to their respective working frequencies.

It is the "always in use" business of the coast station frequency that we want. The station, depending on the season and time of day, occupies several bands simultaneously sending nothing but CQ's (or V's) and their call sign over and over again. This not only keeps their channel clear, but if a ship can hear it he knows that he stands a good chance of being heard also. Now here we have plenty of practice material, all the figures and letters of the alphabet repeated for as many times as we care to listen. The list of frequency bands will show where to start looking for calls. When a signal is heard the beginner should wait until he can hear either a series of V's or

CQ's and then identify one letter at a time of the call and on each succeeding repetition listen to the original letter(s) and identify a further one.

Incidentally, coast stations have three-letter calls while ship stations have four. Coast stations often suffix their calls with one or more numerals to indicate the bands in use at that moment. A call may be sent as follows: CQ CQ CQ DE VIX/3/4/5 VIX-3/4/5 VIX3/4/5 or alternatively, VVV VVV VVV DE ZLW6/8/12 ZLW6/8/12 ZLW6/8/12.

One of the best all round bands is the 8 Mc. and without trying hard I have heard quite a few countries. The list of some stations and their frequencies is included to give some idea of where to find one with respect to another. In addition as recognition becomes easier, traffic lists make good practice material. Coast stations, at hourly intervals (as a rule) and staggered times, send lists of ships for which they have traffic. Each call sign is sent twice so that, for our purpose, we can check that what we have identified is correct.

While any nationality has traffic for all ships, it will naturally have most for its own and of the remainder, more will belong to the major mercantile fleets of the world. For instance, VIS (Sydney Radio) will have a lot of G's and M's of Great Britain, J's of Japan, but most will be VJ, VK, VL, VM of our own with a sprinkling of HO and HP, I, K, L, P, S and W with only isolated calls for other ships. With call signs, traffic lists and perserverance (i.e. small sessions frequently—and don't let it get you down so that you throw in the towel), confidence and speed will come easily and before long the tyro has actually learned the code. He will be able to take weather reports, news sessions and the like as easily as hearing someone speaking.

Come on you Z calls, get cracking, and I will see you on the d.c. bands sometime.

COAST STATION WORKING FREQUENCY SEGMENTS

| | |
|------------------|--------------------|
| 4238 to 4368 Kc. | 12714 to 13130 Kc. |
| 6357 to 6525 Kc. | 16952 to 17290 Kc. |
| 8476 to 8745 Kc. | 22400 to 22650 Kc. |

THE COMPLETE 8 Mc. BAND

8265-8354 Kc.—Passenger ship working.
8354-8374 Kc.—Calling band with 8364 as the calling and distress frequency.
8374-8476 Kc.—Cargo ship working.
8476-8745 Kc.—Coast station working.

For interest, with the exception of the 22 Mc. band, all calling frequencies are harmonically related, viz. 4182, 6273, 8364, 12546, 16728 and 22245 Kc.

SOME COAST STATION FREQUENCIES (Kc.)

8478—VIX and VHP Sydney; OST4 Ostende.
8482—DAN Norddeich; JCU.
8486—WOE Lantana; DZR Manila.
8490—NPN Guam; IBQ.
8495—PZN Paramaribo, Surinam.
8498—SAG4 Gottenborg; NSS Washington.
8502—IQX Trieste; XSG Shanghai.
8510—IDR4 Rome.
8511.5—DAL Norddeich.
8514—WSL New York.
8522—VIS26; FFL4 St. Lys., France; JOR.
8526—WAX Ojus.
8538—PJK3.
8542—FUS.
8546—GKN Portishead.
8554—ZLB Awarua; CKN4 Vancouver.
8557—SPEA 4 St. Zeeuwin (Stettin).
8558—KFS San Francisco.
8562—PCH2 Schenvenigen.
8566—VPS Cape D'Aguilar (Hong Kong).
8570—WNU Slidell.
8574—LGB Bergen; HJU Buenaventura.
8582—KLB Seattle; XSW Kaohsiung, Tai-wan.
8586—WCC Chatham.
8590—KOK Los Angeles.
8594—GYR Malta.
8602—HEZ.
8606—KSE Torrance.
8610—WSC Tuckerton; DZE Manila.
8614—CKN Vancouver; GYC4 Whitehall.
8618—KPH Bolinas.
8630—GYS Singapore.
8634—SPH4 Gdynia.
8642—KPH Bolinas.
8646—LPD86 Buenos Aires; DZG Manila.
8650—ICB Genoa.
8654—PCH4 Schenvenigen; JCS Chosi.
8658—WSL New York.
8660—DHS Rugen.
8662—VIS Sydney; CFH Halifax.
8666—KLC Galveston.
8670—IAR Rome.
8674—FPF3 Fort De France, Martinique.
8678—LFB Bergen; ZLP4 Wellington Naval Radio.
8682—EAD3 Aranjuez, Spain.
8686—JCT Chosi.
8690—VRP Suva.
8694—JZS3 Hollandia; PJC Curacao, Neth. Antilles.
8698—FJP8 Noumea.
8702—ZLW Wellington; NBA Balboa.
8706—JOS Nagasaki.
8714—KTK San Francisco; XSX Keelung, Formosa.
8718—VPW Singapore.
8726—OFJ Helsinki.
8730—CUB Madeira.
8742—HLP2 Pusan, Korea.

* Post Office Box 5, Clayton, Vic.

SINGLE PACKAGE XMITTER FOR 160 AND 2 METRES

(Continued from Page 5)

of the grid resistors of V2 and V3 should be temporarily disconnected.

Switch the transmitter for 144 Mc. operation and insert V1 and V2 into their sockets. Fit a suitable 8 Mc. xtal to the xtal socket. Switch on heater supply and apply h.t. to V1 only. With a meter set to its 2 mA. range, connected from the earthy end of R3 to the cathode of V2, adjust the core of L1 for maximum current indication on the meter. This should be about 1.2 mA. occurring when the core of L1 just starts to enter the winding.

Disconnect the h.t., re-connect R3 to the cathode of V2, and restore the h.t. supply connections to V2. Insert V3 and temporarily break the connections taking h.t. to the anode circuit and screen grid of this valve.

of the link until the p.a. draws 60-65 mA. Check the dip in anode current by tuning C18 slightly as the link is swung into position. If C18 has to be varied considerably from its initial setting as the link is progressively coupled to the p.a. tank circuit, look for a mismatch in either the dummy load or the aerial. In this respect an s.w.r. bridge will be found a useful adjunct. Once the p.a. is loaded, re-adjust L4 for maximum grid drive to V4.

To set up the transmitter for 1.8 Mc. operation, the first adjustments relate to the v.f.o.

Switch off the power and set S1 for 1.8 Mc. operation. Apply power via the stabiliser to the v.f.o. only. Set C7 to minimum capacity. Adjust C5 until the oscillator frequency is precisely 2 Mc. Set C7 to maximum capacity. Check the lower frequency to which the v.f.o. has now tuned. This will be below 1.8 Mc. Reduce the in-

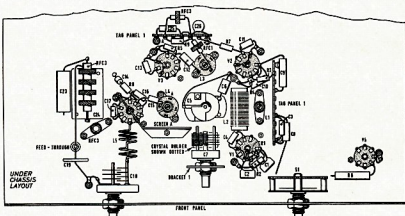


Fig. 4.—Positions of the sub-chassis components. Ample space is left for the inclusion of a simple modulator.

Connect the meter between the earthy end of R5 and chassis. Apply power to V1 and V2. Tune the brass slug of L3 for maximum grid current to V3. This should be of the order of 1 mA. Check that the frequency to which L3 is tuned is 72 Mc.

Remove the power, re-connect R5, and restore the h.t. supplies to V3. Insert V4 and disconnect the lead marked "modulated h.t." in Fig. 1 from the modulation transformer or the h.t. supply.

Apply power and tune L4 by means of the brass slug until maximum current is indicated on the grid current meter of V4. This should be about 0.2 mA. Check the frequency present in L4 by means of an absorption wavemeter.

Remove h.t. from the transmitter and restore the h.t. connection to the p.a. valve, V4.

Apply h.t. to the whole transmitter and rapidly tune C18 for maximum dip in the anode current to V4. Remove the h.t. Bring a wavemeter within reasonable distance of L5, apply power and quickly check that this circuit is tuned to 144 Mc.

With either an 80 ohm dummy load or a 144 Mc. aerial connected to the link winding of L5, adjust the position

ductance of L2 by removing one turn at a time until the oscillator frequency is 1.8 Mc. Since removing turns from L2 will affect the highest frequency to which the v.f.o. will tune, after each adjustment to L2 check the highest frequency and adjust C5 so that this is 2 Mc. Repeat these adjustments in the order and manner given until the v.f.o. tunes 1.8-2 Mc.

Apply power to the driver stages, and the v.f.o. and check the grid current to the p.a. If the chokes specified have been fitted, then the 6.8K ohm resistor across RFC2 will produce a grid current of 2 mA. to the p.a. If other chokes have been substituted, the value for the resistor to be fitted at R9 will have to be found by trial and error.

No special comments are required on the Top Band pi-network output circuit which functions in the normal manner.

CONCLUSION

As will be appreciated, this transmitter is of a very useful design in itself, but there would seem to be no reason why similar circuit configurations could not be successfully worked out for other powers and bands. The prime requirements are that the two frequencies involved should be fairly well divorced from each other.

NEW CALL SIGNS

SEPTEMBER 1965

- VK2SS—T. Ivins, 63 Clarence St., Bankstown.
VK2VO—J. Summerhays, Russell St., Wollstonecraft.
VK2AAG—C. Churn, 23 Third Ave., Epping.
VK2AHO—M. J. Kelly, 61 Ewing St., Murwillumbah.
VK2AR—H. J. Robinson, 2/19 Cooper St., Paddington.
VK2AVS—I. K. Dunlop, 1 James St., Murwillumbah.
VK2AWK—W. R. Penberthy, 3 Lyla St., Beverly Hills.
VK2AYS—T. W. A. Wilson, 3/265 Victoria St., Parramatta.
VK2ZAX—L. A. Maschette, 22 Phillip Rd., Raymond Terrace.
VK2ZMM—R. C. Milton, 6 High St., Cabramatta.
VK2ZPO—C. L. Scally, 64 Grafton St., Woollra.
VK2ZA—P. A. Smith, 44 Raleigh Ave., Carlingbush.
VK3AGM—G. H. Loft, 36 Hopwood St., Echuca.
VK3ARO—R. W. F. Chalmers, 6 Gatehouse St., Parkville.
VK3ZP—L. A. Patterson, 33 Inkerman St., Macleod.
VK3ZWR—P. W. Thorp, 128 Glen Iris Rd., Glen Iris.
VK4BD—B. J. Doran, 23 Telegraph Rd., Bald Hills.
VK4YS—Goodwindi Scout Troop Radio Club, 33 McLean St., Goodwindi.
VK5EL—A. G. Landers, 78 Grant Ave., Rose Park.
VK5EW—A. B. Foster, 10 Haldane St., Elizabeth Downs.
VK5QS—Radio Trade School, Meyer St., Torrensville.
VK5XH—R. D. Hall, Snow's Rd., Stirling West.
VK5ZIR—R. W. Edwards, 4 Leonard St., Edwaredale.
VK6ZAJ—G. Drage, 240 Jersey St., Wembley.
VK6ZFA—M. J. Garth, Babbage Island Rd., Carnarvon.

Publications Committee Reports That . . .

All inwards correspondence received after 3rd December, 1965, will be acknowledged in the February issue of "A.R." The fact that the January issue had an earlier copy date was overlooked by

A SELF POWERED C.W. MONITOR*

or Look Maw! No Batteries!

OTIS WRENCH, WOMQB

AS every c.w. operator that has ever worked me knows, I have a lousy fist, and it is even lousier if my code monitor is not working. I've always had one (code monitor, that is) albeit my tale of woe and frustration has its silver lining and happy ending.

I've always been a strong adherent to the principle of versatility. Not only does it save the cost of chassis pans, panels, cabinets and bumper feet, but there is a great deal of satisfaction in having a piece of equipment that will do umpteen dozen things. Not all at once, mind you, but it will do them, one at a time. It also keeps the XXV interested, because she has her eye on that chassis if I ever salvage it. She says she is going to use it for a cullender some day.

If my code monitor was anything, it was versatile. It was also a very satisfactory code monitor at certain times. But it had seven double pole double throw toggle switches on the front panel and one double pole double throw slide switch. (I had depleted my supply of toggle switches.) Also a speaker, a meter, a phone jack, a pitch control knob, a meter adjust knob, a dial for the code monitor input capacitor, a dial for the variable oscillator, a dial for the doubler, tripler stage, a five-position band switch and two crystal sockets, plus three tally lights. Oh yes, also two pots and two banana jacks on the back panel, but I've long since forgotten what they were for.

It was a joy to behold. It was a code monitor and an a.m. monitor. You only had to plug in a headset to monitor phone. It was field strength meter that worked fine. I transistorised that part of it several years ago when transistors first became available at bargain prices. It was also a 100 Kc. and 1,000 Kc. crystal calibrator, with and without tone modulation. (A double pole double throw switch selected that mode of operation.) It had two crystal sockets on the front panel for the most popular types (with me) of holders. That stage was a type of Pierce oscillator, untuned, and the meter could be switched from the field strength position to read a portion of the grid voltage, and hence give an indication of the activity of the crystal.

There was a variable oscillator in it, covering the low frequency range, which I thought I needed to align my BC433. However, I was never quite sure of the calibration of this low frequency oscillator, and never used it. (It's coming out on the next modification.) Also there was a tuned doubler, tripler, quadrupler (?) stage which could be fed by either the Test Xtal or Calibrate Xtal stage by throwing the

appropriate switches in the right direction, and which would give me marker points down to 6 metres, depending, of course, on which crystal I was using at the time. It could also be used as a single frequency audio oscillator and as a code practice oscillator.

Now, isn't that a humdinger? What more could you ask for on one little 8" x 10" panel? The only problem was that after it had set there for a while, I forgot which switch to throw which way to get the code monitor to work.

One evening while in the middle of my third QSO (and I still hadn't thrown the right switches to get the code monitor turned on) I had a happy thought. Why not build a separate code monitor? What evolved was placed in a 4" x 5" x 3" aluminium box.

I did and the circuit is shown in Fig. 1. Most of the parts were scrounged from a defunct transistorised radio. Capacitor C1 is the tuning capacitor with both sections paralleled. There are no numbers on the transistor; they were rubbed off long ago, but it is a p.n.p. type. I can't decipher the code on the diode either so any type you have will probably do.

One disappointment in the works. I bought a red banana plug and jack and ripped up a cute little 18" whip antenna that sticks up out of the top. My 55 watt rig wasn't quite powerful enough. It just wasn't loud enough. I tied about 10 feet of wire to the whip, and now it is just right. I measured the voltage at the top of the 2 μ F. capacitor and found that it was approximately 5 volts, using the 10 ft. piece of wire for an antenna.

It would startle me at first. I would close the key to test the transmitter, and it would immediately start squalling like a junior op. that had been stepped on, and I knew I hadn't turned it on. But then you will get used to it after coming back to turn it off a few times, and you will glory in it, and say, "Look, Maw! It don't run up no light bill and you don't have to buy no batteries! It's free!"

And, incidentally, if you build one of these and it doesn't work, don't write me. I didn't have to troubleshoot mine either time. Fortunately it worked both times I put it together. When I hawired it together and when I put it in the box.

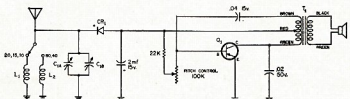


Fig. 1.—Circuit of a self powered c.w. monitor. Most of the components, speaker included, are salvaged from an old transistor radio.

C1—See text.

L1—8 turns, 24 gauge enamel on 1/2 inch diam. poly. rod.

L2—40 turns 24 gauge enamel on other end of L1 rod.

T1—Lafayette TR-69.

Q1—Any audio type p.n.p. See text.

If you use an n.p.n. type transistor simply reverse the diode polarity and it will work also.

I originally had intended to power it with batteries, and I hawired the oscillator section together first. Testing it with a depleted pen light cell I had taken out of my Tunnel Dipper, it gave out a weak chirp.

At that point I had another wild idea. Suppose I could power it from the air? I hastily wired up the front section, and clipping a test lead on the top of the capacitor for an antenna, I turned the transmitter on. It sat there and squalled like a harmonic with a wet diaper.

From that point on, it was a matter of taking it apart and putting it back together in the box, applying the decals, and setting it on the operating desk in front of me.

If you want to visit, I'll show you mine, and prove that it does work. I'll even take the back cover off so you can see there aren't any batteries in it! Good luck, OM es 73.

★

ERRATA

In the article "Some 6-Metre Antennae" (Dec. '65 "A.R.") the length of the 50 ohm matching stub should be 35 1/2 inches not 52 inches, as in Fig. 1.

Also Fig. 2, mentioned in the text (third paragraph) does not refer to the diagram marked Fig. 2. It should be Fig. 1 as a Gamma-match obviously has nothing to do with a Q-match. The Q-match details should be clear from Fig. 2.



WARBURTON FRANKI

● MULTIMETERS—200H

Fan shaped meter movement.

Ranges: DCV—5, 25, 50, 250, 2,500 at 20K Ω p.v.
ACV—10, 50, 100, 500, 1,000 at 10K Ω p.v.
DC mA—50 μ A, 2.5 mA, 250 mA.
OHMS—600, 600K.
CAP—10 pF. to 0.1 μ F.
DB—Minus 20 to plus 22.

Supplied with leads and instruction leaflet.

95/- (\$9.50)

Plus S/T 12½%. Pack and Post 1/6.

● TRANSISTOR AMPLIFIER—SINCLAIR X-20 PULSE-WIDTH MODULATED AMPLIFIER AND PRE-AMP. OPEN MATRIX BOARD CONSTRUCTION

12 Transistors, size 8½ x 3½ x 1 in. Weight 4 ozs.

Input sensitivity—1 mV. into 5,000 Ω s.

Total harmonic distortion—Less than 0.1% at 10W.

Frequency response at all power levels—20 c/s. to 20 Kc.
plus 1 db.

Damping Factor—greater than 100.

Quiescent consumption—approx. 150 mA.

Supply Voltage—28 to 37 volts (7.5 ohm speaker).

28 to 45 volts (15 ohm speaker).

Output Power—7.5 ohm Speaker, 20 watts r.m.s. music power.
15 ohm Speaker, 15 watts r.m.s. music power.

Supplied with comprehensive descriptive booklet showing
circuit and recommended circuitry for volume
and tone controls.

£13/5/0 (\$26.50)

Plus S/T 25%. Pack and Post 1/-.

A.C. POWER SUPPLY TO SUIT—

(Will supply two Amplifiers for Stereo use)

£6/6/0 (\$12.60)

Plus S/T 12½%. Pack and Post 2/6.

● MULTIMETERS—SANWA 370-X

Ranges: DCV—3, 6, 12, 120, 300, 1,200, 3,000 at 4K Ω p.v.

ACV—6, 12, 120, 300, 1,200, 3,000 at 4K Ω p.v.

DC mA—0.3, 3, 30, 300.

DC Amps—3, 12.

AC Amps—3, 12.

OHMS—10K, 100K, 1 meg., 10 meg.

DB—Minus 10 to plus 17.

Minus 0 to plus 23.

Supplied with two pairs of test leads and comprehensive
instruction booklet.

£13 (\$26)

Plus S/T 12½%. Pack and Post 2/6.

Wooden Carrying Case to suit. Well made with safety lock
and removable lid.

£3/19/0 (\$7.90)

Plus S/T 12½%. Pack and Post 2/-.

● TELECOMPONENTS

Television spares. Available from stock. Write or call
for lists.

STOCKTAKING BARGAINS

● SILICON DIODES

18 amps. at 50 p.v. Available either K or A to Case.

7/6 each (75c)

Plus S/T 12½%. Pack and Post 6d. each.

ALSO 1 amp. at 1,000 p.v.

13/6 each (\$1.35)

Plus S/T 12½%. Pack and Post 6d. each.

● VARIABLE CONDENSERS

100 pF. maximum, 17 plates, ½" shaft.

6/- (60c)

Plus S/T 25%. Post Free.

● KNIFE SWITCHES

Double pole with spark gap. 4" x 1½".

5/7 (56c)

Plus S/T 25%. Pack and Post 6d.

● CABINETS OF DRAWERS

Fitted with Carrying Handle and Drawer Lock for
portable use.

SIZE OVERALL—12" x 9" x 4½".

CONTAINS—16 Drawers, 5½" x 2½" x 1½".

45/4 (\$4.53)

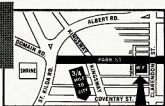
Plus S/T 12½%.



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AUSTRALIAN DX CENTURY CLUB AWARD

OBJECTS

- 1.1 This Award was created in order to stimulate interest in working DX in Australia and to give successful applicants some tangible recognition of their achievements.
- 1.2 This Award, to be known as the "DX Century Club" Award, will be issued to any Australian Amateur who satisfies the following conditions.
- 1.3 A certificate of the Award will be issued to the applicants who show proof of having contacted one hundred countries, and will be endorsed as necessary, for contacts made using only one type of emission.

REQUIREMENTS

- 2.1 Verifications are required from one hundred different countries as shown in the Official Countries List.
- 2.2 The Official Countries List will be published annually in "Amateur Radio" and will be amended from time to time as required. Should a country be deleted from the Countries List at any time, members and intending members will be credited with such country if the date of contact was before such deletion.
- 2.3 The commencing date for the Award is 1st January 1946. All contacts made on or after this date may be included.

OPERATION

- 3.1 Contacts must be made in the H.F. Band (Band 7) which extends from 3 to 30 Mc., but such contacts must only be made in the authorised Amateur Bands in Band 7.

- 3.2 All contacts must be two-way contacts on the same band. Cross band contacts will not be allowed.
- 3.3 Contacts may be made using any authorised type of emission for the band concerned.
- 3.4 Credit may only be claimed for contacts with stations using regularly-assigned Government call signs for the country concerned.
- 3.5 Contacts made with ship or aircraft stations will not be allowed, but land-mobile stations may be claimed, provided their specific location at the time of contact is clearly shown on the verification.
- 3.6 All stations must be contacted from the same call area by the applicant, although if the call sign is subsequently changed, contacts will be allowed under the new call sign providing the applicant is still in the same call area.
- 3.7 All contacts must be made when operating in accordance with the Regulations laid down in the "Handbook for the Guidance of Operators of Amateur Wireless Stations" or its successor.

VERIFICATIONS

- 4.1 It will be necessary for the applicant to produce verifications in the form of QSL cards or other written evidence showing that two-way contacts have taken place.
- 4.2 Each verification submitted must be exactly as received from the station contacted, and altered or forged verifications will be grounds for disqualification of the applicant.

- 4.3 Each verification submitted must show the date and time of contact, type of emission and frequency band used, the report and the location or address of the station at the time of contact.
- 4.4 A check list must accompany every application setting out the details for each claimed station in accordance with the details required in Rule 4.3.

APPLICATIONS

- 5.1 Applications for membership shall be addressed to the Awards Officer, Box 2611W, G.P.O., Melbourne, Vic., accompanied by the verifications and the check list with sufficient postage enclosed for their return to the applicant, registration being included if desired.
- 5.2 A nominal charge of 2/6, which shall also be forwarded with the application, will be made for the issue of the certificate to successful applicants who are non-members of the Wireless Institute of Australia.
- 5.3 Successful applicants will be listed periodically in "Amateur Radio". Members of the D.X.C.C. wishing to have their verified country totals, over and above the one hundred necessary for membership, listed will notify these totals to the Awards Officer.
- 5.4 In all cases of dispute, the decision of the Awards Officer and two members of the Federal Executive of the W.I.A. in the interpretation and application of these Rules shall be final and binding.
- 5.5 Notwithstanding anything to the contrary in the Rules, the Federal Council of the W.I.A. reserves the right to amend them when necessary.

AUSTRALIAN V.H.F. CENTURY CLUB AWARD

OBJECTS

- 1.1 This Award has been created in order to stimulate interest in the V.H.F. bands in Australia, and to give successful applicants some tangible recognition of their achievements.
- 1.2 This Award, to be known as the "V.H.F. Century Club" Award, will be issued to any Australian Amateur who satisfies the following conditions.
- 1.3 Certificates of the Award will be issued to the applicants who show proof of having made one hundred contacts on the V.H.F. bands, and will be endorsed as necessary, for contacts made using only one type of emission.

REQUIREMENTS

- 2.1 Contacts must be made in the V.H.F. Band (Band 8) which extends from 30 to 300 Mc., but such contacts must only be made in the authorised Amateur Bands in Band 8.
- 2.2 In the case of the authorised bands between 30 and 100 Mc. verifications are required from one hundred different stations at least seventy of which must be Australian. The Amateur Bands 50 to 54 Mc. and 56 to 60 Mc. will be counted as one band for the purposes of the Award.
- 2.3 In the case of the authorised Amateur Band between 100 to 200 Mc. and any authorised band between 200 to 300 Mc., verifications from one hundred different stations for each band is required.
- 2.4 It is possible under these rules for one applicant to receive three certificates, one for each of the authorised Amateur Bands nominated in Rules 2.2 and 2.3.
- 2.5 The commencing date for the Award is 1st June, 1948. All contacts made on or after this date may be included.

OPERATION

- 3.1 All contacts must be two-way contacts on the same band, and cross band contacts will not be allowed.
- 3.2 Contacts may be made using any authorised type of emission for the band concerned.
- 3.3 Fixed stations may contact portable/mobile stations and vice versa, but portable/mobile station applicants must make their contacts from within the same call area.
- 3.4 Applicants, when operating either portable/mobile or fixed, may contact the same station licensee, but may not include both contacts for the same type of endorsement.
- 3.5 Applicants may only count one contact for a station worked as a limited licensee with a Z call sign who is subsequently contacted as a full A.O.C.P. holder.
- 3.6 All stations must be contacted from the same call area by the applicant, although if the applicant's call sign is subsequently changed, contacts will be allowed under the new call sign providing the applicant is still in the same call area.
- 3.7 All contacts must be made when operating in accordance with the Regulations laid down in the "Handbook for the Guidance of Operators of Amateur Wireless Stations" or its successor.

VERIFICATIONS

- 4.1 It will be necessary for the applicant to produce verifications in the form of QSL cards or other written evidence showing that two-way contacts have taken place.
- 4.2 Each verification submitted must be exactly as received from the station contacted, and altered or forged verifications will be grounds for disqualification of the applicant.
- 4.3 Each verification submitted must show the date and time of contact, type of emission and frequency band used, the report and the location or address of the station at the time of contact.

- 4.4 A check list must accompany every application setting out the following details:—
 - 4.4.1 Applicant's name and call sign, and whether a member of the W.I.A. or not.
 - 4.4.2 Band for which application is made, and whether special endorsement is involved.
 - 4.4.3 Where applicable, the date of change of call sign and previous call sign.
 - 4.4.4 Details of each contact as required by Rule 4.3.
 - 4.4.5 The applicant's location at the time of each contact if portable/mobile operation is involved.
 - 4.4.6 Any relevant details of any contact about which some doubt might exist.

APPLICATIONS

- 5.1 Applications for membership shall be addressed to the Awards Officer, Box 2611W, G.P.O., Melbourne, Vic., accompanied by the verifications and the check list with sufficient postage enclosed for their return to the applicant, registration being included if desired.
- 5.2 A nominal charge of 2/6, which shall also be forwarded with the application, will be made for the issue of the certificate to successful applicants who are non-members of the Wireless Institute of Australia.
- 5.3 Successful applicants will be listed periodically in "Amateur Radio". Members of the V.H.F.C.C. wishing to have their verified totals, over and above the one hundred necessary for membership, listed will notify these totals to the Awards Officer.
- 5.4 In all cases of dispute, the decision of the Awards Officer and two members of the Federal Executive of the W.I.A. in the interpretation and application of these Rules shall be final and binding.
- 5.5 Notwithstanding anything to the contrary in these Rules, the Federal Council of the W.I.A. reserves the right to amend them when necessary.

AUSTRALIAN D.X.C.C. COUNTRIES LIST

| | Phone | C.W. | | Phone | C.W. |
|-------------------------------|----------------------|------|--------------------|-----------------------|------|
| AC3 | Sikkim | | FM8 | Comoro Is. | |
| AC4 | Tibet | | FI8 (pr'r 20/7/55) | Fr. Indo China | |
| AC5 | Bhutan | | FK8 | New Caledonia | |
| AP | East Pakistan | | FL8 | Fr. Somaliland | |
| AP | West Pakistan | | FM7 | Martinique | |
| BV (C3) | Formosa | | FN (prior 1/11/54) | French India | |
| BY (C) | China | | FO8 | Clipperton I. | |
| C9 (prior 1/1/64) | Manchuria | | FO8 | Fr. Oceania | |
| CE | Chile | | FP8 | St. Pierre & Miq. Is. | |
| CE9, KC4, LU-Z, VK0, VP8, ZL5 | | | *FQ8 | Fr. Equatorial Africa | |
| | etc., Antarctica | | TL8 (fr. 13/8/60) | Cen. Afric. R. | |
| CE0A | Easter I. | | TN8 (from 15/8/60) | Congo Rep. | |
| CE0X | St. Felix I. | | TR8 (from 17/8/60) | Gabon Rep. | |
| CE0Z | J. Fernandez Arch. | | TT8 (from 11/8/60) | Chad Rep. | |
| CM, CO | Cuba | | FR7 (from 25/6/60) | Glorioso I. | |
| CN2 (prior 1/7/60) | Tangier | | FR7 (from 25/6/60) | Juan de Nova | |
| CN2, 8, 9 | Morocco | | | and Europa Is. | |
| CP | Bolivia | | FR7 | Reunion I. | |
| CR3 | Portuguese Guinea | | FR7 | Tromelin Is. | |
| CR4 | Cape Verde Is. | | FS7 | Saint Martin | |
| CR5 | Principe, Sao Thome | | FU8, YJ1, 8 | New Hebrides | |
| CR6 | Angola | | FW8 | Wallis & Futuna Is. | |
| CR7 | Mozambique | | FY7 | Fr. Guiana & Inini | |
| CR8 (prior 1/1/62) | Goa | | G | England | |
| CR8, 10 | Port. Timor | | GC | Guernsey and Deps. | |
| CR9 | Macao | | GC | Jersey I. | |
| CT1 | Portugal | | GD | Isle of Man | |
| CT2 | Azores | | GI | Northern Ireland | |
| CT3 | Madeira Is. | | GM | Scotland | |
| CX | Uruguay | | GW | Wales | |
| DJ, DL, DM | Germany | | HA | Hungary | |
| DU | Philippine Is. | | HB | Switzerland | |
| EA | Spain | | HC | Ecuador | |
| EA6 | Balearic Is. | | HC8E | Ebon Atoll | |
| EA8 | Canary Is. | | HC8G | Galapagos Is. | |
| EA9 | Ifni | | HB0 (HE) | Liechtenstein | |
| EA9 | Rio de Oro | | HH | Haiti | |
| EA9 | Spanish Morocco | | HI | Dominican Rep. | |
| EA0 | Spanish Guinea | | HK, 5J | Colombia | |
| EI | Rep. of Ireland | | HK0 | Arch. of San Andres | |
| EL | Liberia | | | and Providencia | |
| EP, EQ | Iran | | HK0 | Bajo Nuevo | |
| ET2 (prior 14/11/62) | Eritrea | | HK0 | Malpelo Is. | |
| ET2, 3, 9E | Ethiopia | | HL, HM, 6N5 | Korea | |
| F | France | | HP | Panama | |
| FB8 | A'dam & St. Paul Is. | | HR | Honduras | |
| FB8 | Crozet Is. | | HS | Thailand | |
| FB8 | Kerguelen Is. | | HV | Vatican | |
| FC | Corsica | | HZ (see 7Z) | | |
| *FF8 | French West Africa | | I1, IT1 | Italy | |
| TU2 (fr. 7/8/60) | Ivory Coast R. | | I1 (prior 1/4/57) | Trieste | |
| TY2 (fr. 1/8/60) | Dahomey Rep. | | I5 (prior 1/7/60) | It. Somaliland | |
| TZ2 (from 20/6/60) | Mali Rep. | | IS1 | Sardinia | |
| XT2 (from 5/8/60) | Voltaic Rep. | | JA, KA | Japan | |
| 5U7 (from 3/8/60) | Niger Rep. | | JT1 | Mongolia | |
| 5T5 (from 20/6/60) | Mauritania | | JY | Jordan | |
| 6W8 (fr. 20/6/60) | Senegal Rep. | | JZ0 (pr'r 1/5/63) | W. New Guinea | |
| FG7 | Guadeloupe | | K, W | U.S.A. | |

*Fr. West Africa and Fr. Equatorial Africa: Only contacts dated prior to when the particular area obtained separate listing (as shown) will count.

| | Phone | C.W. | | Phone | C.W. |
|-----------|---|------|----------------|-----------------------------|------|
| KA0, KG6I | Bonin & Volcano Is. | | ST2 | Sudan | |
| KB6 | Baker, Howland and Am. Phoenix I. (inc. Canton I.) | | SU | Egypt | |
| KC4 | Navassa I. | | SV | Crete | |
| KC6 | Eastern Caroline Is. | | SV | Dodecanese | |
| KC8 | Western Caroline Is. | | SV | Greece | |
| KG4 | Guantanamo Bay | | TA | Turkey | |
| KG6 | Guam | | TF | Iceland | |
| KG6 | Marcus I. | | TG | Guatemala | |
| KG6 | (Rota, Tinian, Saipan, etc.) Mariana Is. | | TI | Costa Rica | |
| KH6 | Hawaiian Is. | | TI9 | Cocos I. | |
| KH6 | Kure I. | | TI9C | Cormoran Reef | |
| KJ8 | Johnston I. | | TJ (FE8) | Cameroon Rep. | |
| KL7 | Alaska | | TL, TN, TR, TT | (see after FQ8) | |
| KM6 | Midway Is. | | TS (3V8) | Tunisia | |
| KP4 | Puerto Rico | | TU, TY, TZ | (see after FF8) | |
| KP6 | Palmyra Group, Jarvis I. | | UA1-6, UN1 | Eur. R.S.F.S.R. | |
| KR6 | Ryukyu Is. | | UA1 | Franz Josef Land | |
| KS4B | Ser'na Bank & Roncad Cay | | UA2 | Kaliningrad Region | |
| KS4 | Swan Is. | | UA9, 0 | Asiatic R.S.F.S.R. | |
| KS6 | American Samoa | | UB5 | Ukraine | |
| KV4 | Virgin Is. | | UC2 | White Russian S.S.R. | |
| KW6 | Wake I. | | UD6 | Azerbaijan | |
| KX6 | Marshall Is. | | UF6 | Georgia | |
| KZ3 | Canal Zone | | UG6 | Armenia | |
| LA | Bouvet I. | | UH8 | Turkoman | |
| LA | Jan Mayen | | UI8 | Uzbek | |
| LA | Norway | | UJ8 | Tadzhik | |
| LA | Svalbard | | UL7 | Kazakh | |
| LU | Argentina | | UM8 | Kirghiz | |
| LX | Luxembourg | | UN1 | (prior 1/7/60) Kar-Fin.Rep. | |
| LZ | Bulgaria | | UO5 | Moldavia | |
| MP4 | Bahrain | | UP2 | Lithuania | |
| MP4 | Qatar | | UQ2 | Latvia | |
| MP4 | Trucial Oman | | UR2 | Estonia | |
| OA | Peru | | VE, VO | Canada | |
| OD5 | Lebanon | | VK | Australia | |
| OE | Austria | | VK2 | Lord Howe Is. | |
| OH | Finland | | VK4 | Willis Is. | |
| OH0 | Aland Is. | | VK9 | Christmas I. | |
| OK | Czechoslovakia | | VK9 | Cocos Is. | |
| ON4 | Belgium | | VK9 | Nauru I. | |
| OX, KG1 | Greenland | | VK9 | Norfolk I. | |
| OY | Faeroes | | VK9 | Papua Terr. | |
| OZ | Denmark | | VK9 | Terr. of New Guinea | |
| PA0, P11 | Netherlands | | VK0 | Heard I. | |
| PJ | Neth. West Indies | | VK0 | Macquarie I. | |
| PJ2M | Sint Maarten | | VO | (prior 1/4/49) Newf./Lab. | |
| PK1, 2, 3 | (prior 1/5/63) Java | | VP1 | British Honduras | |
| PK4 | (prior 1/5/63) Sumatra | | †VP2 | (prior 1/6/58) Leeward Is. | |
| PK5 | (prior 1/5/63) Borneo | | VP2 | Anguilla | |
| PK6 | (prior 1/5/63) Celebes and Molucca Is. | | VP2 | Antigua, Barbuda | |
| PX | Andorra | | VP2 | Br. Virgin Is. | |
| PY | Brazil | | VP2 | Montserrat | |
| PY0 | Fernando de Noronha | | VP2 | St. Kitts, Nevis | |
| PY0 | St. Peter & Paul Rocks | | †VP2 | (prior 1/6/58) Windw'd Is. | |
| PY0 | Trindade & Martin Vaz Is. | | VP2 | Dominica | |
| PZ1 | Netherlands Guiana | | VP2 | Grenada & Deps. | |
| SL, SM | Sweden | | VP2 | St. Lucia | |
| SP | Poland | | VP2 | St. Vincent & Deps. | |
| | | | VP3 | British Guiana | |
| | | | VP4 | Trinidad & Tobago | |

† One contact with each group formerly known as "Leeward Is." and "Windward Is." dated prior to 1/6/58 may be credited, in which case no further credit as a separate listing, as from 1/6/58, will be given those particular islands.

| | Phone | C.W. | | Phone | C.W. |
|-------------------------------------|-------------------------|------|------------------------------|---------------------------|------|
| VP5 | Cayman Is. | | ZK1 | Cook Is. | |
| VP5 | Turks & Caicos Is. | | ZK1 | Manihiki Is. | |
| VP6 | Barbados | | ZK2 | Niue | |
| VP7 | Bahama Is. | | ZL | Chatham Is. | |
| VP8 | Falkland Is. | | ZL | New Zealand | |
| VP8, LU-Z | South Georgia | | ZL1 | Kermadec Is. | |
| VP8, LU-Z | South Orkney Is. | | ZL4 | Auckland and Campbell Is. | |
| VP8, LU-Z | South Sandwich Is. | | ZM7 | Tokelau | |
| VP8, LU-Z, CE9 | Sth. Shet. Is. | | ZP | Paraguay | |
| VP9 | Bermuda Is. | | ZS1, 2, 4, 5, 6 | Rep. of S. Africa | |
| VQ6 (prior 1/7/60) | Br. Somalil'd | | ZS2 | Prince Ed. and Marion I. | |
| VQ8 | Agalega & St. Brandon | | ZS3 | South-West Africa | |
| VQ8 | Chagos Is. | | ZS7 (see ZD5) | | |
| VQ8 | Mauritius | | ZS8 | Basutoland | |
| VQ8 | Rodriguez I. | | ZS9 | Bechuanaland | |
| VQ9 | Aldabra Is. | | IS | Spratty Is. | |
| VQ9 | Seychelles | | 3A | Monaco | |
| VR1 (includ. Canton Is.) | British Phoenix Is. | | 3W8, XV5 | Vietnam | |
| VR1 Gilbert & Ellice Is., Ocean Is. | | | 4S7 (VS7) | Ceylon | |
| VR2 | Fiji Is. | | 4U1 | I.T.U. Geneva | |
| VR3 | Fanning & Christmas Is. | | 4W1 | Yemen | |
| VR4 | Solomon Is. | | 4X4 (from 14/5/48) | Israel | |
| VR5 | Tonga Is. | | 5A | Libya | |
| VR6 | Pitcairn I. | | 5B4 (ZC4) | Cyprus | |
| VS4 (prior 16/9/63) | Sarawak | | 5H1 (VQ1) | Zanzibar | |
| VS5 | Brunei | | 5H3 (VQ3) | Tanganyika | |
| VS6 | Hong Kong | | 5N2 (ZD2) | Nigeria | |
| VS9 | Aden & Socotra | | 5R8 (FB8 Madagascar) | Malagasy | |
| VS9 | Kamran Is. | | 5T5, 5U7 (see after FF8) | | |
| VS9 | Kuria Muria | | 5V | Togolese Rep. | |
| VS9 | Maldiva Is. | | 5W1 (ZM6) | Samoa | |
| VS9 | Sultanate of Oman | | 5X5 (VQ5) | Uganda | |
| VU2 | India | | 5Z4 (VQ4) | Kenya | |
| VU | Laccadive Is. | | 6N5 (see HL) | | |
| VU | Andaman & Nicobar Is. | | 6O1, 6O2 (fm. 1/7/60) | Somalia R. | |
| XE, XF | Mexico | | 6W8 (see after FF8) | | |
| XF4 | Revilla Gigedo | | 6Y (VP5) | Jamaica | |
| XT2 (see after FF8) | | | 7G1 (from 1/10/58) | Rp. of Guinea | |
| XU | Cambodia | | 7Q7 (ZD6, Nyasaland) | Malawi | |
| XW8 | Laos | | 7X2 (FA) | Algeria | |
| XZ2 | Burma | | 7Z (HZ) | Saudi Arabia | |
| YA | Afghanistan | | 8F (from 1/5/63) | Indonesia | |
| YI | Iraq | | 8Z4 | Saudi Arabia-Iraq N.Z. | |
| YK | Syria | | 8Z5 (9K3) | Saudi Ar.-Kuwait N.Z. | |
| YN, YN0 | Nicaragua | | 9A (MI) | San Marino | |
| YO | Roumania | | 9G1 (from 5/3/57) | Ghana | |
| YS | Salvador | | 9H1 (ZB1) | Malta | |
| YU | Yugoslavia | | 9J (VQ2, N. Rhod.) | Zambia | |
| YV | Venezuela | | 9K2 | Kuwait | |
| YV0 | Aves I. | | 9L1 (ZD1) | Sierra Leone | |
| ZA | Albania | | 9M2 (prior 16/9/63) | Malaya | |
| ZB1 (see 9H1) | | | 9M2 (from 16/9/63) | W. Malaysia | |
| ZB2 | Gibraltar | | 9M4 (VS1) | Singapore | |
| ZC5 (pr. 16/9/63) | Br. Nth. Borneo | | 9M6, 9M8 (from 16/9/63) | East Malaysia | |
| ZC6 | Palestine | | 9N1 | Nepal | |
| ZD3 | The Gambia | | 9Q5 (pr. OQ5-0) | R. of The Congo | |
| ZD4 (pr. 5/3/57) | Gold Coast, Togo | | 9S4 (prior 1/4/57) | Saar | |
| ZD5 (ZS7) | Swaziland | | 9U5 (from 1/7/60 to 30/6/62) | | |
| ZD7 | St. Helena | | | Ruanda-Urundi | |
| ZD8 | Ascension Is. | | 9U5 (from 1/7/62) | Burundi | |
| ZD9 T. da Cunha and Gough Is. | | | 9X5 (from 1/7/62) | Rwanda Rep. | |
| ZE | Southern Rhodesia | | | | |

†From 16/9/63 to 8/8/65 counts as West Malaysia.

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publishers.

Editor "A.R." Dear Sir,

Each month I have noticed in "A.R." magazine that the VK5 Divisional notes are allotted quite a lot of news columns—this may be a good thing for the South Australian Division, but to others, like myself, it seems an awful waste of valuable information space. I feel that these notes could be reduced to a more reasonable length and the remaining space be rightly used to bring to the majority of readers items of interest either technical or non-technical.

—Arthur Johnson, VK4PX

[Couldn't agree more.—Ed.]

Editor "A.R." Dear Sir,

I am prompted to write to you on the topic which is foremost in very many Amateurs' minds and which also arouses much sundry correspondence these days—i.e. "Going S.s.b."

Much has been said over the air and much has been written, but from observation I feel that the situation here in Australia seems to have resolved in a division of the Amateurs into four distinct categories:—

(1) The "commercial s.s.b'ers" with their Swans, Galaxies, etc.—very nice too and good luck to them but, of course, their ranks are limited by the financial status of the individual.

(2) The "home-brew s.s.b'ers"—this section comprises mainly our more technically advanced brothers who, in many cases, have available through their employment the use of test equipment etc., far removed from that which may be found in the average lovely Ham shack. They also, in many cases, have access to a ready supply of components at negligible cost.

(3) The old-timer who has got along well enough on a.m. for the past thirty years and is "damned if I'm going to mess around with this new-fangled radio business for the sake of life!" His point of view, whilst not progressive, can be well understood and some of the reasons for his conservatism will be of our present day "progressives" will be voicing similar sentiments thirty years hence!

(4) A very large proportion of the Amateur community are not interested in the value of s.b. operation and would genuinely like to go s.b.—but do not have available the equipment other than the old g.d.o. and the "old time" type of transmitter and receiver box" of components and are not endowed with the great surplus of Decibels. This group, I think, is the greater proportion of the Australian Amateurs.

At this point you may be making any one of a number of remarks, depending on the category above into which you fall, but you are all in the same boat.

So this I feel that our Amateur organization, in its role of furthering the interests of Amateurs as a whole and appreciating the great job already done, could tap its resources and provide the high school and college student who is relatively simpleminded but has a keen interest in the hobby with a series of articles and circuits on, say, a complete single band s.a.b. transmitter followed possibly by a multiband transmitter and then a complete transceiver. These should be written in a simple, direct line of components giving details of individual items together with availability and names of suppliers.

It is quite well known that very many Americans have been awaiting such a project for some time. I am disappointed to have to say that it is not going to be done, and I do not see why our own W.I.A. members could not produce something of the same kind. I am sure that the following points will be raised in anguish at this point but I feel that the situation is such that it is better to say what I have said. Many members if such a project were undertaken, I well realise that many of the usual objections would be raised. I am sure that Mag. but very many of them assume that the reader has an equivalent knowledge and understanding of the situation. I am sure that the specific components which the author "happened to have in his junk box" and which he has included in the book, are not the only sources of supply. I am sure that in Australia often to find that one is unable to duplicate the par-

I would like to commend Steve VK1VK, among others, for his recent efforts and offers to assist his fellow Amateurs along the way.

to s.s.b. and appreciate his remarks regarding d.s.b. but I feel, with the majority, that if we are going to empty our piggybanks we might as well go all the way and eliminate that other sideband as well!

So, gentlemen, can someone come up with the works, along the lines of the "Electronics" projects (see 3-band d.s.b. transmitter in November issue) even though it may take up considerable space in the Magazine (you could always cut Pansy down to a mere two or three pages, thereby giving the poor old chap a bit of a rest), and help me poor sheep to support a mare more fully of our hobby—of course we still have to find the money and build the things!

—J. S. Beckingham, VK4JI

[Pub. Comm. would welcome such an article.—Ed.]

Editor "A.R.," Dear Sir,

The letters published in the November 1963 issue require further comment because Mr. Gunther of Hobart apparently does not know about preferential Commonwealth import duties and therefore comes to an invalid conclusion, and Mr. Cunningham of Melbourne evades the KW200 transceiver issue and only proves that in the case of an Eddystone ECKO receiver he is satisfied with the profit he makes with his discount on the U.K. net prices plus duties.

Contrary to Mr. Whalley's (VK6KK) assumptions, there is no sales tax on Amateur equipment in the U.K. In Britain it is a "purchase" tax, i.e. on retail price not trade price. Secondly, K.W. Electronics only recently is catching up in production with the order back-



Sub-Editor: D. GRANTLEY, WIA-L2022
Alexander Ave., Hazelbrook, N.S.W.

1965 has dawned to a close, and as we look back for some it has been a year of achievement and amongst these members I feel must mention two of our chaps. Firstly, to Peter Drew, you have done a fine job Peter, my personal congratulations to you as you appear the head of the DX ladder, and may we all see you in the top position also. Secondly, I feel that another event worth recalling, even though it occurred last month, was the issue of S.w.I. D.X.C.C. No. 1 to our number one listener, Eric L3042, a fitting reward for years of faithful service.

To those of our number who have graduated to the ranks of licensed Amateurs in 1963 we extend our best wishes and wish you good hunting in your new field of activity.

In closing these few introductory remarks, both Charles and I would like to thank all our friends who have been so loyal to us, and Charles says a very special "thank you" to all who wrote when his wife was in hospital. I am sure also, judging by comments I have received in the mail that all our chaps are grateful for the continued co-operation which we are receiving from the Publications Committee and look forward to our continued good relations in 1986.

A name which has appeared regularly in "A.R." for many years is L2333, Don Shepherd, of Casino. Of late, Don has restricted his operating to the 133 ft. main contest, where he has been running a 133 ft. 24 ft. high, running E/W and connected to the rx through tuned feeders and an a.t.u. An impressive list of contest certificates include a 1st place award in the 133 ft. main contest, five 4th place awards in the 133 ft. 24 ft. high, four VK-ZL and one R.D., also the silver cup given by the VK2 S.w.I. Group for the R.D. The only award he has in the Elizabethan award, but don't be misled by this as Don is one of our best contest operators. Good luck OM.

Election of office-bearers took place at the October meeting and the following were installed: President, Harry Roach; Vice-Presidents, Brian Hannan and Robert Halligan; Secretary, Ian Woodman; Treasurer, Tony Armstrong; Publicity, Ross Lazarus, and QSL

During November most members have been busy with examinations or re-erecting their

log, until recently only sold direct to the public and for export, and allows hardly any or very little discount for overseas importers. They have no agents in the U.K. either. So Mr. Cunningham's cost of the transceiver in question was very little below what everybody else had to pay for it. As a matter of fact a year ago the set was extremely hard to get. In that light the sales price as advertised in Australia left a substantial, but not uncommensurate profit margin, except that the tax charge on the retail price, which is not quite what the importer pays in most cases

Many Amateurs have little idea of the actual overhead expenses of the importers. The interest lost on outstanding capital, handling and insurance charges, the 2½ resp. 45 per cent import duties and the 10 per cent VAT are added to the total plus 20 per cent. theoretical profit margin calculation. They also overlook that certain items are heavier than 22 lbs. when packed and cannot be imported with only a few pounds of postage. The parcel post is not better than sea freight when imported privately by ocean freight. The cream is certainly off the Amateur supply business in Australia with the prevailing competition and considering the colossal import duties and the 10 per cent VAT. UK Amateurs are selling a very fair deal.

Mr. Whaley (VKEKK) in private correspondence, suggested that freedom from duties for Amateur equipment imported in Australia is long overdue. Nobody will disagree with that, but there is little hope for that—the Dept. of Customs and Excise even flatly refuses to consider by-law applications for Amateur equipment that is not even made in near equivalents by the local industry.

—A. Bles.

antennae which were blown down in recent storms. During the past year the Group had many interesting lectures and outings, the average attendance at the monthly meetings being 30. A sub-committee of seven members are producing a s.w.l. newsletter, the first should be available to all Institute members at the time of this issue. The first meeting for 1966 will be held on 28th January.

Examinations have severely hampered interstate reports this month and most letters come from the "older" brigade. From KY26, Madison Hilliard has been on 1 Mc. and comments on the late signal to be making a check on all directions at once. He also has heard signal on 10 mxx but at present is restricted to 28.7 to 28.7 Mc. Class L2002 has also been inactive but was pleased to receive a card from L4534, an understudy of the same station. From KY. At this QTH L2022 activity has been at a minimum but good openings have been noted on 7 Mc. in the early morning. A new comer to our page L2019, C. Middleton-Williams of Chester Hill submits a fine list including L2019, L2022, L2023, L2024, L2025, L2026, L2027, L2028, L2029, L2030, L2031, L2032, L2033, L2034, L2035, L2036, L2037, L2038, L2039, L2040, L2041, L2042, L2043, L2044, L2045, L2046, L2047, L2048, L2049, L2050, L2051, L2052, L2053, L2054, L2055, L2056, L2057, L2058, L2059, L2060, L2061, L2062, L2063, L2064, L2065, L2066, L2067, L2068, L2069, L2070, L2071, L2072, L2073, L2074, L2075, L2076, L2077, L2078, L2079, L2080, L2081, L2082, L2083, L2084, L2085, L2086, L2087, L2088, L2089, L2090, L2091, L2092, L2093, L2094, L2095, L2096, L2097, L2098, L2099, L2100, L2101, L2102, L2103, L2104, L2105, L2106, L2107, L2108, L2109, L2110, L2111, L2112, L2113, L2114, L2115, L2116, L2117, L2118, L2119, L2120, L2121, L2122, L2123, L2124, L2125, L2126, L2127, L2128, L2129, L2130, L2131, L2132, L2133, L2134, L2135, L2136, L2137, L2138, L2139, L2140, L2141, L2142, L2143, L2144, L2145, L2146, L2147, L2148, L2149, L2150, L2151, L2152, L2153, L2154, L2155, L2156, L2157, L2158, L2159, L2160, L2161, L2162, L2163, L2164, L2165, L2166, L2167, L2168, L2169, L2170, L2171, L2172, L2173, L2174, L2175, L2176, L2177, L2178, L2179, L2180, L2181, L2182, L2183, L2184, L2185, L2186, L2187, L2188, L2189, L2190, L2191, L2192, L2193, L2194, L2195, L2196, L2197, L2198, L2199, L2200, L2201, L2202, L2203, L2204, L2205, L2206, L2207, L2208, L2209, L2210, L2211, L2212, L2213, L2214, L2215, L2216, L2217, L2218, L2219, L2220, L2221, L2222, L2223, L2224, L2225, L2226, L2227, L2228, L2229, L2230, L2231, L2232, L2233, L2234, L2235, L2236, L2237, L2238, L2239, L2240, L2241, L2242, L2243, L2244, L2245, L2246, L2247, L2248, L2249, L2250, L2251, L2252, L2253, L2254, L2255, L2256, L2257, L2258, L2259, L2260, L2261, L2262, L2263, L2264, L2265, L2266, L2267, L2268, L2269, L2270, L2271, L2272, L2273, L2274, L2275, L2276, L2277, L2278, L2279, L2280, L2281, L2282, L2283, L2284, L2285, L2286, L2287, L2288, L2289, L2290, L2291, L2292, L2293, L2294, L2295, L2296, L2297, L2298, L2299, L2300, L2301, L2302, L2303, L2304, L2305, L2306, L2307, L2308, L2309, L2310, L2311, L2312, L2313, L2314, L2315, L2316, L2317, L2318, L2319, L2320, L2321, L2322, L2323, L2324, L2325, L2326, L2327, L2328, L2329, L2330, L2331, L2332, L2333, L2334, L2335, L2336, L2337, L2338, L2339, L2340, L2341, L2342, L2343, L2344, L2345, L2346, L2347, L2348, L2349, L2350, L2351, L2352, L2353, L2354, L2355, L2356, L2357, L2358, L2359, L2360, L2361, L2362, L2363, L2364, L2365, L2366, L2367, L2368, L2369, L2370, L2371, L2372, L2373, L2374, L2375, L2376, L2377, L2378, L2379, L2380, L2381, L2382, L2383, L2384, L2385, L2386, L2387, L2388, L2389, L2390, L2391, L2392, L2393, L2394, L2395, L2396, L2397, L2398, L2399, L2400, L2401, L2402, L2403, L2404, L2405, L2406, L2407, L2408, L2409, L2410, L2411, L2412, L2413, L2414, L2415, L2416, L2417, L2418, L2419, L2420, L2421, L2422, L2423, L2424, L2425, L2426, L2427, L2428, L2429, L2430, L2431, L2432, L2433, L2434, L2435, L2436, L2437, L2438, L2439, L2440, L2441, L2442, L2443, L2444, L2445, L2446, L2447, L2448, L2449, L2450, L2451, L2452, L2453, L2454, L2455, L2456, L2457, L2458, L2459, L2460, L2461, L2462, L2463, L2464, L2465, L2466, L2467, L2468, L2469, L2470, L2471, L2472, L2473, L2474, L2475, L2476, L2477, L2478, L2479, L2480, L2481, L2482, L2483, L2484, L2485, L2486, L2487, L2488, L2489, L2490, L2491, L2492, L2493, L2494, L2495, L2496, L2497, L2498, L2499, L2500, L2501, L2502, L2503, L2504, L2505, L2506, L2507, L2508, L2509, L2510, L2511, L2512, L2513, L2514, L2515, L2516, L2517, L2518, L2519, L2520, L2521, L2522, L2523, L2524, L2525, L2526, L2527, L2528, L2529, L2530, L2531, L2532, L2533, L2534, L2535, L2536, L2537, L2538, L2539, L2540, L2541, L2542, L2543, L2544, L2545, L2546, L2547, L2548, L2549, L2550, L2551, L2552, L2553, L2554, L2555, L2556, L2557, L2558, L2559, L2560, L2561, L2562, L2563, L2564, L2565, L2566, L2567, L2568, L2569, L2570, L2571, L2572, L2573, L2574, L2575, L2576, L2577, L2578, L2579, L2580, L2581, L2582, L2583, L2584, L2585, L2586, L2587, L2588, L2589, L2590, L2591, L2592, L2593, L2594, L2595, L2596, L2597, L2598, L2599, L2600, L2601, L2602, L2603, L2604, L2605, L2606, L2607, L2608, L2609, L2610, L2611, L2612, L2613, L2614, L2615, L2616, L2617, L2618, L2619, L2620, L2621, L2622, L2623, L2624, L2625, L2626, L2627, L2628, L2629, L2630, L2631, L2632, L2633, L2634, L2635, L2636, L2637, L2638, L2639, L2640, L2641, L2642, L2643, L2644, L2645, L2646, L2647, L2648, L2649, L2650, L2651, L2652, L2653, L2654, L2655, L2656, L2657, L2658, L2659, L2660, L2661, L2662, L2663, L2664, L2665, L2666, L2667, L2668, L2669, L2670, L2671, L2672, L2673, L

In VK3 Eric Trebblecock's listings reflect the band conditions in that State, however I will list his countries heard during Nov. on 80 mhz bands. The following are listed by country: AUSTRALIA SM, YU, KL7, W, DF2, UA0, in many cases there were several calls from each country. This band can be really good for c.w. inward QSLs to take care of. In addition, I have had some DX on UZBPB VK9AG, XE1NL, JY8WW, SW1AZ and KC4USX. Whilst on VK3, Bob Halligan has QSL'd to hand from DL1TTF, VK6AK, K1RM, K1JW, K1V, VK4AG and VY2P. Bob's approach is doing well and has a conscientious approach to his QSLing. Greg Earl reports good DX on the 80m band. He has received QSLs from JA, THL3R, YS8R, XE and XN1.

If conditions in VK2 and VK3 are good then they must be excellent in VK4 where Afton Westcott L2136/4 reports 10 mx improving each week, and 20 being the main DX band at present. Best of Afton's bunch were on 14 Mc. s.s.b.: LU4, 9M8, OZ6, PA0 YAL and 534.

Only other reports this month come from L6028, L6029 and L6030 in W.A. and again it seems that 15 mx is pulling in the DX over in the West. JA, ZEL, ZL, G, KR6 were logged on that band, whilst YS, CX, ZS6, VE, KX6, KC4, PY2, PK8, OK and many others were heard on 20. It was a great pleasure to exchange tapes with these lads early this month and make personal contact.

My remarks on this subject in a previous issue brought a prompt reply from Robt Padula, VK3ZFU, who is the secretary of the Victorian Branch of the N.Z.D.X.B.A. Should

Continued on Page 17)

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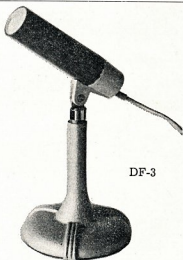
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SECRET

Sub-Editor: PHIL WILLIAMS, VK5NN

S.B.S. TRANSCEIVERS

There have been numerous requests for information about the various types of transceivers now available to the Australian Amateur, so I am taking the liberty of making this the theme for the summer holiday editions of these notes.

In general, it may be said that the transceiver is a single package combined transmitter-receiver using as much apparatus as possible common to both functions. This usually boils down to a common I.F. strip including the crystal or mechanical filter, and common oscillator circuits, both crystal and variable, which are switched to the appropriate parts of the circuits.

My first introduction to transceiving was a unit using the oscillators from the HT32A transmitter, feeding via cathode followers to a mixer unit, thence to a converted "Super-Pro" tuned to 9 Mc. This "lash-up" was used by a U.S. serviceman overseas for phone-patch work during the mid-50s, the object then, being to send the transmission back to the States on the same frequency as was coming back. In this way, transmitter tuning was all that was needed.

About this time, Collins brought out the three-band KW1M for 10, 15 and 20 mc and three years later were very popular. Kits for DX at that point in time, these units were popular. Since the late 50s, however, the five-band KW2M and 755/225 transceivers have been taken the time-lapse. Anybody with a disused KW1M for sale is advised to wait for several more years, when its value is expected to rise to a substantial figure.

Another transceiver that appeared at this time was the "Cosmophone," which was originally designed as a transceiver for its size, shape and weight were about the same as a Marconi CR100 receiver. It appeared in a 90w, and a full kilowatt version, but the latter was never produced. The 90w version, for transmit and the other for receive, with provision to change at will. Many of the more recent transceivers have "quick-change" versions which enable this to be done. It is important to note that this Cosmophone was the forerunner of many of the advanced units available today, but has now become a discontinued line—mainly because of its appearance. When operating cross-band, viz. U.S. phone band to foreign phone band, one had to be on guard against inadvertently transmitting on the wrong v.f.o. The reaction to this was akin to driving wrong way down a "one-way" street. Apart from mentioning that this Cosmophone had a mechanical filter for sideband generation and reception and was powered by a single unit, no more than that both it and the KW1M were expensive.

The next transceiver excursion by a big manufacturer was the Hallicrafters FPM-2000, a beautiful little unit, with lots of transistors and a pair of 6146s in the final, but it just could not be produced and sold under 2,000 dollars so that apart from being used for a few DX-peditions not much has been heard of it. I had the pleasure of operating one of these at W2AVA's establishment in New York City, and can vouch for its performance. It was offered at a bargain price—still more than a new KW1M, so it remained unsold.

Collins KW2M, brought out in 1959, has been in production for six years now, and is still basically the same apart from minor changes which appear from time to time. When one considers their re-sale value, this unit is an economical one, but alas, and particularly in Australia, financing a Rolls and a KW2M fall into the same category—just another illustration that "only the rich can afford to be economical."

After this, it seems that everybody wanted to get into the act and almost as many firms now make transceivers as make vacuum tube machines, and designs are based as competitive and full of "must" features.

Swan transceivers were next on the scene with the now famous SW120, using a 5A6, a 6X4 and a single 6DQ5 output. Some clever people discovered that these could be made into a three-band job with a few extra switches and the pluck to dive into a new set with drills, cutters and soldering iron. Swan then brought out the 240 version, tri-band, and Hallicrafters came along with a similar tri-

bander—the SR-150—in 1962, to be followed a year later with the SR-100 for five-band work. R. L. Drake, of Ohio, then brought out his first transceiver in the same year (1963). His TR-3, a five-band unit (the previously made receivers) used 9 Mc. filters—yes, two of them, one for upper and another for lower sideband—and has been a successful unit for both home and mobile use.

At about this time World Radio Labs. brought out a tri-band Galaxy transceiver, which although quite a large unit, established them in the market. The newer and smaller Galaxy III was produced in 1964, followed closely in the same year by the Galaxy V., both of which are still in production and widely used.

The National Co. brought out their NCX-3 in 1963, their first attempt to re-enter the serious high-class equipment field since the post-war years. The more recent NCX-5 is a five-band version covering 80-10 mc. Both units have been popular, to say the least.

The Heath Co., makers of well known kits, has been successful with single band transceiver kits using crystal filters and printed circuits. Some time ago publicity was given to a larger five-band transceiver, but this has not materialised, although the separate transmitter/receiver units of the same construction are available and can be connected for transceiving. The smaller kits, the HW-12, HW-22 and HW-35 may be tri-band by addition of more coils and components for an additional 50 dollars, and this has been stated to be the cheapest way of getting on the 20, 40 and 80 mc bands. The kits for conversion are by Dynalab, not Heathkit, just by the way.

Swan has recently kept to the fore with the five-band Swan-350 which has an in-built transmitter v.f.o. and the Swan-400 with alternative external v.f.o.s. The small mobile v.f.o. covers popular s.b. band sections, and the larger mobile gives complete band coverage.

"Side-band Engineers" in California have marketed a transistorised four-band unit, the SB-33 for several years and a late version of the SB-34 is basically the same but with additional features, such as slower tuning

rate. The transmitter output is, of course, obtained from valves, two 1V, time-base types.

Two later additions to the parade are "Zico" selling their model 753 in either kit or wired form—and there are Australian agents, so I see in "A.R.", and "Transcom" with their SBT-3. The latter is again a transistorised unit and although I do not have details of the circuits, it appears to be comparable with the SB-34 except that external power supplies are required for the SBT-3.

(Continued next month)



SWL

(Continued from Page 15)

any reader be at all interested in commercial DX? Robt. would like to hear from you at 404 Mont Albert Rd., Surrey Hills, E.10, Vic.

Re the programme "DX Party Line" from HCJB, advice is to hand from Bill Dalrymple, 20 Goulburn St., Sydney, their VK rep., to the effect that this programme is heard on first and third Wednesdays of the month at 7.30 p.m. our time on 6.05 or 9.45 Mc.

DX NEWS

Very little this month, PK1UX says all QSLs via R.E.F. Don't send a "bare" report to ZL1A or ZL1B, the latter is in the w.b.b. AUTAD, heard recently asks for all QSLs to go to WHMI, the op. of 5UTAU (501AU) has now returned to the States. Tnx "Monitor".

DX LADDER

There are several alterations since our last publication, including the deletion of names which have been missing for three months.

| | Countries | Zones | W |
|---------------|-----------|-------|--------------|
| | Conf. | Hrd. | Conf. States |
| E. Treblecock | 229 | 295 | 40 50 |
| P. Drew | 170 | 250 | 37 40 |
| D. Grantley | 128 | 290 | 38 40 |
| W. Smith | 108 | 190 | 32 7 |
| A. Westcott | 106 | 159 | 34 11 |
| R. Kearney | 100 | 161 | 33 8 |
| G. Earl | 98 | 165 | 33 16 |
| M. Hilliard | 93 | 241 | 33 14 |
| C. Abernethy | 83 | 105 | 33 14 |
| D. Shepherd | 83 | 163 | 32 18 |
| B. Prosser | 60 | 180 | 17 8 |
| A. Halferty | 49 | 175 | 24 11 |
| D. Shepherd | 31 | 96 | 11 |
| R. Halferty | 21 | 136 | 11 1 |

To qualify for a position on the ladder it is necessary to have ten confirmations.

Well chaps, that's it from here, 73s to you all and good listening in 1966-1967.

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Sub-Editor: ALAN SHAWSMITH, VK4SS
35 Whynot St., West End, Brisbane, Qld.

Conditions continue to improve slowly, 21 Mc. particularly has been quite good and open from early morning until after dark. However, VK chapter seems almost non-existent on this band at the moment. So wind another coil please! Make the effort, it is worth it.

NOTES AND NEWS

Agales: Harvey VQ8BFA managed a three-day stint early in Nov. Next burst from the island will be mid-December. QSL GRSK, 09MKS/2MG: Active from Sabah, 14200, 1200Z.

Easter Is.: Reported on 20 c.w. 6300Z. Look around 14605. Call is CE6AC.

Bahamas Rep.: TYIATB opens up on 21400 a.s.b. about 1300Z but will QRT under a pile up. Mauritius: Roul VQ8AL on 14700 at 2000Z.

Spanish Morocco: EA2AZ, 21309 with daily sked at 1600Z with KP4C1.

Turkmen: UH8PD is a YL 14100 at 1500Z.

Mauritania: Alband ST5AD, 21150, 1600Z.

Morocco: Jean ZA2BP, 14250, 1400Z. QTH OK in book.

Congo Rep.: TN6AF, 21065, 1900Z.

Ceylon: ARSTV, 14200, 1200Z. Also several on A1 mode 20 Mc both at 0100 and 1200Z approx.

Swaziland: Archie ZD8R and Des ZD8M both QRV. QSL to VE4QOX for the former. Modes s.b.s. 14100 and c.w. also 21 Mc.

Rep. of Guinea: Josef G1A, 21000, 1800Z.

Malawi: Q7QPB and Q7QPS both QRV on 14 Mc., A1 mode. Try 1200Z. Also Q7QBN said to be operating 21 Mc. s.b.s. 1730Z. QSL the latter via W6FQ.

Intl and Rio de Oro: Mike EA3QT still says he is going to operate from these places during Dec. and Jan. No other info.

Bonaire: Ginny FJ5BD is rumored still active on 14 Mc. s.b.s.

Antigua: VP2AX 14290 1900Z, also VP2AC 14240 1100Z.

Grand Turk Is.: VP5AR reported as still active and is expected to continue for some time. 14 s.b. and probably A1 mode. Try 0400Z or 2030Z I.p.

ZD8ML is listed as active on all bands and modes. Not heard yet at this QTH.

Togo: SV5ECM 14 s.b. and c.w. Will operate for one year. QSL to F. Fayet, P.O. Box 123, Lome, Togo.

Jan Mayen: LA5AJ/P 14040 1800Z, also s.b.s. at times.

FSBWV: Now on s.b.s. So reports from Eu say, 14 Mc. around 0700Z might find him.

CR5P: 21390, 2100Z. Says he prefers to be called in Spanish. Erdutite VKs please note.

OCAMT: in now at time of writing, but not known for how long. 14285, 1400/1500Z.

Portuguese Timor: CR8AE and CR8AF both QRV, the former s.b.s. and the latter A1 mode. Both 14 Mc. and CR8AE's QSL goes to Dull, Timor.

Tahiti: FO8AQ 14 s.b.s. 0645Z. C/o. Pannaua, Tahiti. Also FO8BI active on all bands, c.w.

Pago Pago: KS5EH 14 s.b.s. 0500Z. QSL to Box 8. Also one or two others operating.

Pitcairn: Tom VR7CT regularly on 21065 2200Z. Sked first with WS0LG to arrange Tmo to call. Always a mass of Ws on the freq.

Br. Guiana: soon to be independent and renamed Guyana. Not known if prefix will be changed.

Singapore: Since break with Malaysia, is regarded as new country.

Govt. of Turks and Caicos transferred now to Govt. of Bahamas. This may mean another possible decline in D.X.C.C.

ACTIVITIES

Chas VK4UC has found time between study and school-teaching to snare a few good ones. All 25 c.w.: Q7QPS 1200, FR7Z/M 1300, FL8RA 0900 QSL W2JJK, CR8AF 0900, VQ8AL and AW 1400, Z23AB (Box 2488, Dharhan), EP2RV 1100 (QSL GSRV), DU1RF (Box 4083, Manila), PE2EVO (QSL E2FQ), IS5WNV, W9WNV/TIC, W9WNV/ZMT, etc.

Dud VK4MY soaking up retirement on the Gold Coast and working DX. 5247D 2650, HL8KT 1310, OA4JR 1315, Z55UR 1600, 424L 1155, 17IAU7 0850, CX2Z 1000, VS9OC 1130,

FB5YY 1120, W9WNV/ZMT, VS9OC (Oman, 1102Z), SM5TY 1005Z, KRCY 0700, CX1RY 1600, VQ8AL 1340 and others.

Ken VK3JTL lists the following choice ones on 14 Mc.: DU8PC, HV1CN, LA5CI/P (Jan Mayen), OD8EG, OY2B, OH0VE, PE2EVO, FK-1CB, VB8MP, GR8FA, KW1AZ, SM6GDI and more. Best QSLs red. VP1AB, HC8FN, FJ3CD, HP1BR, DU8PC, YS1AG, VP5AR (Grand Turk Is.) and BL1SL.

All times given are G.M.T.

QSL MANAGERS

VR4CU-ZL2LB
VR5AC-ZLIDX
VS8ALD/WL-W5JFF
XZ2TZ-W4ECI
YALAW-K3YXP
AP8B/YA-GHGG
YD10-W9U2C
ZDSM-W2CTN
ZDSR-VEAOX
3V8CA-W8UTQ
8N5X-W85Y

Q9SGE-W8WBT
VK3NO-VKGRU
VK3DR-VK6BU
VK8FZ-W5WW
VP1WS-VP3AA
VP8RK-W5WV
VP8LJ-W2CTN
VP1CS-W2CTN
VQ8B-W5WV
VQ8HD-G3PEK
VQ4RF-W4MCM

SUMMARY

DX-like winds of change are blowing across Amateur Radio too. We are now in the era of island activity. A glance at the notes and news will show this. Expeditions are being planned to islands large and small. To mid ocean fragmentary rocks and awash sand banks. DXing now has an exotic face. A new look if you like. Two players were Danny Well VP2VB and Sir Gus W4BPD, who is still humping gear from one outlandish place to another. Many others are helping to bring the islands of the world to our notice. Our own Bill Hempel, VK3AHO, did his share in Oceania. Feverish contemporaries are Don W9WNV and Chuck K7LMU, both flat out operating from various islands, remote and rare. Their proposed activity from Heard Is. in the near future will be a stout effort if it can be accomplished. Making a landing will be no piece of cake on the wind-torn spot down below the roaring forties.

All this may not be the ultimate for which Amateur Radio exists, but it is providing interest and activity.

A very special thanks to those who have helped provide the column for these past months: LIDXA, Fla. DX'er, Mick

GH3DA (R.S.G.B.), John OH2YV, and locally G3RGL, VK3JTL, John OH2YV, VK4UC, S.w.I. C. Thomas LA618, and others.

Good hunting in 1968. 73, A1 VK4SS.

W.I.A. D.X.C.C.

Listed below are the highest twelve members in each section. New members and those whose totals have amended will also be shown.

PHONE

| Call | Cer. No. | Cnt. rises | Call | Cer. No. | Cnt. rises |
|--------|----------|------------|--------|----------|------------|
| VK5MS | 24 | 320 | VK2JZ | 61 | 244 |
| VK5AB | 45 | 312 | VK1ADE | 65 | 231 |
| VK3AC | 2 | 310 | VK4HR | 12 | 223 |
| VK6MK | 43 | 307 | VK2AAK | 58 | 214 |
| VK3AHO | 31 | 307 | VK6KW | 4 | 211 |
| VK4FJ | 31 | 283 | VK3VL | 14 | 213 |

New Members:

| | | |
|------------|----|-----|
| VK3ACD | 67 | 145 |
| Amendment: | | |
| VK2APK | 64 | 182 |
| VK2AGH | 55 | 118 |
| VK3JTG | 48 | 142 |

C.W.

| Call | Cer. | C'n- | Call | Cer. | C'n- |
|--------|------|------|--------|------|------|
| | No. | ries | | No. | ries |
| VK3KB | 10 | 333 | VK2AGH | 71 | 282 |
| VK2QL | 5 | 308 | VK2EO | 2 | 276 |
| VK3CX | 20 | 306 | VK6RU | 18 | 263 |
| VK4FJ | 29 | 300 | VK3AHQ | 79 | 260 |
| VK2ADE | 81 | 286 | VK3ARX | 66 | 253 |
| VK3NC | 19 | 286 | VK3AL | 75 | 247 |

OPEN

| Call | Cer. No. | C'tries | Call | Cer. No. | C'tries |
|--------|----------|---------|--------|----------|---------|
| VK2ADE | 28 | 322 | VK2ACK | 6 | 300 |
| VK6RU | 8 | 316 | VK3NC | 77 | 287 |
| VK2AGH | 83 | 314 | VK3JA | 43 | 271 |
| VK3AHO | 75 | 310 | VK4HR | 7 | 264 |
| VK6MK | 14 | 309 | VK2VN | 18 | 251 |
| VK4FJ | 32 | 308 | VK2APK | 82 | 243 |

Amendment:

| | | |
|--------|----|-----|
| VK3ACD | 54 | 151 |
|--------|----|-----|

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gear, a room is being set up with test equipment to help the v.h.f. operator.

The January meeting will be held on 8th and is set down as an open night. The Group will be setting up a station again in the National Field Day in February. Regular and well attended fox hunts on both 6 and 2 mhz were held last month.

All the best for the New Year. 73, Tim Z2TH.

SOUTH AUSTRALIA

At last organized pandemonium reigns supreme within the confines of 52.0 and 53.3 megs. Although not unusual for this time of the year, it would appear that in the ensuing months intense sporadic E DX will be available to those who choose to listen. The key is on their gear, which from observations appears to be most difficult for some operators. Nevertheless, activity in VK3 will uphold the tradition. Up till the 28th, stations in VK1, VK2, VK3 (backscatter), VK4, VK5 and VK7 have been available on innumerable occasions. No activity from VK8 and VK9 has been reported as yet.

An excellent opening was experienced on 27th Nov. to ZL1, 2 and 3. Signals up to 5 and 8 plus were available on VK1 for up to two hours.

It has been interesting to note the increased number of stations utilizing the practical advantages of single sideband. It is not unusual to copy a s.b. signal 15 to 20 minutes before the other and also to copy a signal at 5 a.m. opening. However, to fully make advantage of this apparent increased time of band openings more sideband signals are required to exploit the full advantages of this mode. No doubt in DX seasons to come the advantages of s.b. will be enjoyed by many stations.

Anticipating the imminent launch of Oscar IV, many VK3 Amateurs are organizing themselves into groups and pooling their resources to make an honest attempt into obtaining the prize of a postcard from the satellite. It is that the package placed in orbit undamaged and the translator functions more successfully than that of Oscar III.

On the part of the v.h.f. enthusiasts in VK3, I wish to extend the season's greetings to fellow v.h.f.ers in VK and may the Sporadic E gladden down upon us. 73, Colin Z2HJ.

WESTERN AUSTRALIA

November in VK3 brought with it a sub-station of intense activity. The DX season got under way. On Nov. 14, Andy 6ZCN bagged the first DX for the season, with Max 6ZFM in Bridgetown close behind. Since then the DX report and word of DX has been coming thick and fast, including one of ZL television. This augurs well for the months to come.

VK6VF is now running beacons on six, two and 432, so all interested VK3 types can cease complaining about our beacons and start work on your 432 beacon instead. The next move in the better beacons campaign in VK6 is to get the aerials off 6AW's back fence and into the air; the more technical types among us will be able to increase in contrast the result from so doing.

The November meeting of the V.h.f. Group was well attended and several people have been quite a subdued affair with very little business that the table-thumpers could get their teeth into. Even the subject of the next meeting generated very little emotion. A lecture by Trevor 6ZDZ on Radio Astronomy in Australia aroused much interest amongst those present.

The fox hunt was held in Bunbury as part of a Hamfest on the week-end of 20th and 21st and was attended by several people who have been talking sideband, some actually building it, too, but the bulk of traffic is still on the f.m. net. On 22nd Nov. 6ZDZ was the guest of honor at a dinner in Cape Lee, and the next of a car trial with radio. Aub 6ZXY from Wickepin beat the field and John 6ZAG missed a turn somewhere and kept him waiting for about ten miles too far. But the scenery proved so nice when he got there that he decided to stay and see it.

Max 6ZFM distinguished himself later on by splitting his bathers while surfing, and all in all the week-end was a roaring success. Our thanks to the Bunbury types who arranged it all.

Activity on 6 mhz a.m. is on the increase, with a lot of DX. The DX season has been talking sideband, some actually building it, too, but the bulk of traffic is still on the f.m. net. On 22nd Nov. 6ZDZ was the guest of honor at a dinner in Cape Lee, and the next of a car trial with radio. Aub 6ZXY from Wickepin beat the field and John 6ZAG missed a turn somewhere and kept him waiting for about ten miles too far. But the scenery proved so nice when he got there that he decided to stay and see it.

On 2 mhz, activity is still confined mainly to crossband and contacts prearranged elsewhere, but Andy 6ZCN has his 4th element "You Be Good" and about 1000 calls. Don't forget that when six is open, Rolfo 6BO is often up on two looking east (VK3 please note).

There is a DX-pedition planned to Esperance by 6ZAY and 6ZCN on 6 and 2 mhz over the Christmas to New Year period, and others are dispersing round and about. Andy 6ZCN to Meekatharra and Graham 6ZDO to Forrest.

Nothing much has happened on 432 for some time, but it is hoped that the coming of the beacon will change all that and cause some building for that band.

While I remember, Glen 6ZFH will shortly be coming from Dalwalla and Peter 6ZDZ to Onslow in the New Year, so some northern activity may be stirred up that way.

The V.h.f. Group of VK6 extends the compliments of the season to v.h.f. operators everywhere. To all of you east of the rabbit-proof fence, we say 73 and please point the beam west sometimes. Barry 6ZCF.

☆

YOUTH RADIO SCHEME

Some Youth Radio Clubs are fortunate enough to have a number of Amateurs and members are able to gain experience in Amateur Radio communications under the supervision of licensed operators. The club members have a special interest and aptitude for voice communication, the Radio Telephony Operators' Certificate are available in the V.h.f. section.

To eliminate the possibility of turning club members into mere "on-the-air chatterers," the training of the Radio Telephony award is conditional on progress in the technical aspects of Y.R.S. training. The Grade 3 R/T award is available only to members of the Youth Radio Scheme. The Certificate and award, the higher R/T awards assume further progress in the basic series courses. It is expected, too, that candidates for these awards will have received systematic instruction in the handling of station equipment and in the operating aspects specified in "Practical Tests, para. III," before being allowed to participate in "on-the-air" activities.

It must be kept in mind that candidates for these awards are in effect "public relations" representatives of the Youth Radio Scheme. Consequently, club leaders must ensure that only suitable candidates are recommended. Candidates should be given prior instruction in suitable subject matter for QSOs and should be encouraged to make use of the facilities of the Y.R.S. activities involved in the gaining of these awards. It is hoped that, as a result of this supervised operating experience, Y.R. members who finally attain Amateur operator status will introduce a new era of snappy, efficient operating, free of some of the unwarranted mannerisms and idiosyncrasies which beset the Amateur bands at present.

The Log Books, which Candidates must submit, must be carefully and boldly recorded of the thirty contacts with other stations. These Log Books must be attractively presented and should include a suitable appreciable amount of "tear Radio" "lore", such as Amateur prefixes, reporting systems, pictures of Amateur stations (from such notable journals as "Amateur Radio", "QST", "CQ", "QSL" cards, and similar relevant material. In short, they should be "dressed up" to exhibition standard. Club leaders should insist that "only the best will do."

There must be many Amateurs who have seen and thought, "glorious, glorious interest in Amateur Radio." The Y.R.S. Certificate Scheme provides a means whereby such interests may be fostered and the purpose of the Y.R.S. "awareness" by the courtesy of the Editorial Committee is to ensure that ALL VK Amateurs are aware of what Y.R.S. has to offer.

—R. Black, YK2YA.

☆

SOCIETY NEWS

The official publication of the Korean Amateur Radio League, "K.A.R.L. News," has just been received and although it has not yet been read, it is expected to contain a great deal of information, both technical and of local interest. The s.w.l. news section contains quite a good proportion of news items, by the courtesy of L2287. The reproduction of photographs, despite the rather poor quality of the paper, is very good and illustrates what can be done with a few dollars and very little finance. Good luck to "K.A.R.L. News."

Sub-Editor: LEN POYNTER, VK3ZGP
14 Esther Court, Fawkner, N.35, Vic.

Writing this so early in the season seems to be a good time to stick my neck out and make a few predictions. By the time it is in print we will be able to observe the results and comment in detail.

With 52 megs open so early with good openings from early November, it would appear that we might enjoy an excellent season. Early openings across to VK6 and ZL from VK3 makes it look like the 63-64 season when these areas were worked in later November. This produced quite an outstanding season when the W.A.S. on 6 totals went up in great strides. The usual traffic between VK4 to VK5 1, 2, 3, 5, 7 are in earnest and nothing further need be said. Unless Channel 0 reduces test pattern hours many in VK4 and VK3 will find hard work ZLs and perhaps VK5, acquiring front-end overloads, etc.

With the early morning openings predominate from VK3, it could mean a reversal of form from last season when the openings (or the best openings) were in the late afternoon and early evening which put the majority of Melbourne stations in the red.

Whilst on the t.v.l. subject, some Melbourne Amateurs are experimenting with the use of f.m. to overcome the problems of f.m. and early reports appear to be having a good deal of success. The use of f.m. has never been very popular in the past because of the receiver problems, however, it may be the answer to the case. Use of surplus commercial two-way equipment has sparked interest and use of modified commercial equipment has been an inexpensive answer to the receiver problem. The result is a low noise receiver capable of quiet excellent results. It is hoped that this should lead to a long way to overcome the receiver problems.

The loss of the VK3 beacon will impose somewhat of a strain on our VK5 DXers, as they will have to rely on their intuition to forecast conditions. The VK6 beacon was running from 62AA's QTH and all good well will be back at the old QTH for a tryout.

A request to users of the 33.033 Mc. frequency. If you must work on this frequency, please try to keep it quiet and keep the overs short to allow others to use the channel. Better still, if you work off the frequency QSY to 33.033 Mc. and don't pile up the band spot on the band. Many use fixed receivers and one station working to another off the net makes extremely difficult for the band. Some recent efforts completely gummed up the frequency for long periods and they never once listened on the frequency as many were calling but none heard.

There will be no notes in the February issue, so hope you all have a good season. Bags of DX. Best of good wishes for 66 and please send in those logs for the Ross Hull Contest. Spend an extra evening off the air doing your log. 73, Z2GP.

NEW SOUTH WALES

An opening to ZL occurred during the week-end of 20th and 21st Nov. During Saturday afternoon, VK3ZVL was working ZL3RK on 6 mhz. VK3ZVL went to 2 mhz s.b. and they worked cross-band. On Sunday at 1550 (A.S.T.) VK3ZK heard and worked ZL3RK on 2 mhz. Signals peaked to 5 and 8 both ways. Several other stations heard the ZL signals and no other reports of working have been received.

Don't forget the New Year VK3 Field Day, a 24 hour field day on 20th and 21st Jan. It appears likely from all mainland States and New Zealand. About 30 field locations and about the same number of home stations will be taking part.

During November 6 mhz started to open and several all State openings have occurred.

The Y.R.S. activity has been up in VK3 according to all reports. W.I.C.E.N. activity is spreading and several country stations are now active on 6 mhz.

The V.h.f. Group, which transmits a broadcast at 7.30 p.m. on Sunday under the Group call sign VK3BWL, has seen a change in the style of the broadcast. V.h.f. equipment is being installed at Wireless Institute Centre and will be used in the near future. Some stations have been doing some interesting work. Besides installing transmission

FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

FEDERAL QSL BUREAU

S.R.A.L. Finland, new address as from 1st January, 1968, is: c/o S.R.A.L., c/o, 10306, Helsinki 10, Finland.

Cards for PA, PI, PJ and PZ stations can be sent via the QSL Bureau, VRZA, Post Box 190, Groningen, Holland. Copies of Regulations (in English) governing Amateur Radio in Finland may be had on application to this Bureau. The Diploma "Mocambique" will be awarded to every Radio Amateur contacting the CR7 stations as follows:—

(1) First, second and third class Diplomas will be awarded to the Amateurs having, respectively, nine, seven and six Mozambican districts with minimum of ten QSOs with different stations.

(2) Only QSOs made after 7th October, 1968, will be considered.

(3) QSOs to be made on any authorized band (phone, c.w. or mixed), the minimum acceptable being RST 33 and RS 33.

(4) This Diploma will be awarded separately for c.w., phone or mixed. Each CR7 station can be worked several times, provided it is in different band or type of transmission.

(5) Mozambican districts and respective abbreviations are: Cabo Delgado CD, Gaza GZ, Inhambane IB, Manica M, Sofala SF, Mocambique MQ, Niassa NS, Tete TT, Zambezia ZB.

All CR7s will transmit the name of the district following the name of the township where they have the QTH, or just the district's name, in telephony, they will only use the type of transmission.

(6) This Diploma will be awarded to S.w.I. as well, on the same conditions provided they contact at least 19 different stations.

(7) Applications must be sent to L.R.E.M., c/o P.O. 412, Lourenço Marques, Mocambique, together with test R.R. and a list of the name and the contacted CR7, band, call letters and the received and given reports, as well as the type of transmission.

There is no need to send the QSLs along. MIPABEK is now living in Melbourne. Name and current QTH not stated, but may be had from BERE.

—Ray Jones, VK3JRJ, Manager.

NEW SOUTH WALES

Well, another year is with us, and to start activity in the VK2 Division there will be two Conventions for the Australia Day week-end. The Division will be holding their annual event. On Friday night, the meeting at W.I.C. will feature a display of every mode in this Division. On Sunday the field events will be held at the transmitting station VK2WJ—Dural. On the same week-end a Convention will be held in Area 2. It is now being held at Tamworth—not Armidale, because of accommodation problems. On Saturday afternoon there will be a tour of NEN Ch. 9 studios, a dinner at night and a field day on Sunday. Further details of every mode in the Zone 2 circuit and K2BKM at Scene.

In February there will be the field day at Gosford and possibly one in the Hunter Branch.

At the Nov. meeting those who attended heard an excellent lecture by 2AOU on buying and selling. A motion was made at the meeting that the fees of the VK2 Division be increased. It was adopted and as from 1st March 1968 the fee will be \$8 for full members and \$4.50 for associates.

The Canberra Radio Society met on Nov. 17th and officers elected for 68 are: Pres. 10K1M; Vice Pres., Les 1PI; Sec., John 1Q2L; Treas., Bert Forsyth. Don't forget the Canberra Convention at Easter 1968.

SILENT KEY

It is with deep regret that we record the passing of:

VK5IT—Ivor Thomas.

W.I.C.E.N.

The following are the v.h.f. frequencies to be used in VK2 for W.I.C.E.N. Prime mobile frequency 144.1 Mc. and the 144.1 Mc. f.m. channels are (a) \$3.850 and (b) \$3.920, and a.m. (1) \$3.785, (2) \$3.826 and (3) \$3.886. Check the above frequencies before transmitting. All W.I.C.E.N. and frequency inquiries should be directed to the W.I.C.E.N. Secretary, Peter Campbell, 2A3J, 3 Earle Ave., Ashfield.

A reminder that supplies of both printings of the VK2 produced publication known as the "Amateur Guide" is available from this Division. It is worth a total of 16/- for both (6/- to the second sub edition). Address all enquiries to "Handbook", Wireless Institute Centre, Gore's Nest.

All the best for the New Year and 73 from the VK2 Division—Tim 2ZTH.

VK2 DIVISIONAL FAMILY PICNIC

In spite of the very unfavourable weather and opposition from a DX Contest, the Divisional Family Picnic at Parramatta Park on Sunday, 28th Nov., was a great success. Just on 80 people of all ages attended and took part in a programme of events not usually seen at gatherings of the Ham fraternity.

A long list of events kept everyone occupied and practically every person, in all age groups, showed the pleasurable interest in the events willingly and appeared to thoroughly enjoy themselves.

The event that raised the most laughs was the wheel-barrow "mobile". This was a pairs event, consisting of a pusher and a passenger, the latter wearing headphones and carrying a dummy sniffer. Rounding the half-way mark, they changed over, and so back to the finishing line. One sniffer was considered a considerable snuff for the younger men only, but everyone was loudly encouraged by the spectators to "give a go". As captain of the team, I was the slacker of some portly gentleman flat on his back with his feet in the air kept the onlookers in good humour. Incidentally, the wheel of the wheel-barrow was the shape of an egg, through a combination of our Federal Councillor's weight and a bump in the road.

A billiard derby for the older boys was run on similar lines. A toddlers' race was held and they could not get the start. All the children under the age of seven received a gift.

Many other events were held during the day. Before dispersing, there was some discussion about another get-together and it was decided that we meet again at the same spot for a barbecue snack on Sunday, March 6 next.

HUNTER BRANCH

Even before Christmas a long bearded operator from OXK land had visited some of the Branch members and brought them gifts of wonder and delight. Stuart 2AYF was one who hung up his stocking early and found in it one morning a Codar ATS tx. This is a wonderful little device and only a handful but it goes on 80 as well as 160 mcs and has all the usual features. It looks just like the car for the car, so we may expect some more 160 mcs. It happened that the foolish lad that I am, dreamed that some kind person presented me with a big bag of 807s, but, alas when I awoke, it happened that I had my head in the pillow again.

Fred 2ZFO and Henry 2ZGK, who recently received their call signs, are working to get rid of the air on 2 mcs. Henry already has some f.m. gear, "almost there" as he told me. Fred has erected the feeder for the aerial, anyway, so it has made a start. If you see some strange clicking noises on the slow more

frequency in the weeks following this report you may be sure that it is your receiver which is picking up the "air" tricks and not the tx being operated by the VL of the Lakeside, Susan 2BBS. It is said that she now only "hears" Kevin 2JANY to send a crystal when the strange noises will disappear only to be heard again, but this time on the right freq. For the information of all interstate listeners who are weary of coming across such things this is the very same tx which one night was three cycles high.

Some of our members are noted for their low quality and low height aerials and it would be most remiss of me to leave them unmentioned here. Les 2HJ was threatened by the local council for erecting trip wires within the municipal boundary, while Paddy 2AXU is in trouble with the labour and industry men not displaying his collection of licensed dealer in old wares" correctly over the shack. He claimed that it was because he hadn't learned to spell school. What a difference one letter can make!

Those two overcase gentlemen, Ron 2ASJ and Gentlemen Jack from Stockton, have both had bouts of illness recently but from last reports they are improving and have promised to get well again for the new year. As a result Mac 2ZFO has promised a new 2 mcs tx for good results. The reason he's not offered it before is because he spends the night with his eyes following the meter. It paid off recently though when he was able to really get amongst them and work all and saddy on 6 mcs.

By this time Peter 2AIV, one of the Cessnock crew, is on his way to G-land where he intends making investigations into all manner of interesting activities, not the least of which will be the wonders of Amateur operating abroad. His workbench companion, Sherwood 2AIF, is contemplating following him when he has mastered some of the foreign languages used in those distant climes. He is progressing with German though. So far he has learned "I am single" and "What is your telephone number". So he should have no trouble with the rest of his conversation. Even Chris 2PZ is brushing up on the foreign tongues and knows everything on the front of that exotic region which adorns the shack. He has no problem though. Can someone help with the disposal of several dozen large home jars?

The Australian Day week-end looks as if it will be a very interesting time for local operators who have the choice of two field days at Tamworth and Dural—in which to partake. The weather you say, you are assured of a good time as plenty of activity is planned. There is even talk of a "mystery voices" competition at Dural. I hope that the few fractions of a second before the tx is modulated. Then those who use on with a "clunk" will easily be recognised.

Don't make the mistake of attending the January meeting as there will be no one, but Frank 2AFO has arranged that another of the Mullard staff members will be lecturing at the next meeting which will be on February 2nd. Details of the Mullard and Hunter Branch meetings will be given in the weekly news broadcasts from 2AWK. If you are not a member of the I.T.U. Fund, it deserves your support. Well, that's enough for one year. See you when the dollars are about 75, 2A3K.

VK2 DIVISION, W.I.A.

Australia Day Week-End:

Sydney—Divisional Convention:

Meeting: Friday, VK2WJ, Sunday.

Tamworth—Area 2 Convention:

Dinner Saturday, Field Day Sunday.

February:

Gosford and Hunter Branch. Refer to Divisional Bulletin for details.

March:

Barbecue first Sunday in March, at Parramatta Park.

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WESTERN AUSTRALIA

News is rather scarce this month due to recent rains. The main one being very poor conditions, particularly 40 and 80 mc, however the higher bands are exceptional at present particularly 10 and 15 mc.

Absent from the bands for quite some time is John 6GU. On the grape vine we hear that your work has taken you to the beautiful north of the State, "a temporary period of course." Clem 6CW has spoken a rather classy rx. It has the appearance of a Collins but don't think it's one of those. Herb 6XO returned safely from VKS trip and by all accounts Herb and family had a most enjoyable time and fine times trip both ways.

Don't hear much activity lately from the lower region of VK6—that is Albany. It is most unusual not hearing 6KJ's solid signal.

The country stations of this area 6FH, 6XW, 6XY along with John 6ZBY have made contact—Narrogin to Perth—on 8 mc, also worked mobile Bunbury. We do note Pat 6PH takes a leading roll in the bush fire emergency link.

Congrats, Pat. Ian 6XX must be all bottled up. We will have organised a fox hunt on something, to start off at QTH in Ian 6XX. "Well that should at least stir his enthusiasm."

We do hope that the holidays will bring a few more units into action and that the bands and create a little more activity in VK6. If John 6ZBY gets his c.w. complete, he would certainly be an active d.c. Could then call him elusive mobile. He sure covers a vast area in his VK6.

On behalf of the VK6 Council, I wish all readers of this column all the best for a very Happy Christmas and Prosperous New Year 1966. T3, Bob 6KN.

TASMANIA

We welcome three new call signs during the month of November, namely 7RG, Lee Gunther, ex W8THN; 7LY, Mrs. Anne Jenner, ex VK1ZYL, and a call sign to Joe Gelsen, which eludes me at time of writing. Congratulations to all three.

Campbelltown was once again the site for one of the major events in the calendar of Amateur Radio in VK7, namely the Hamfest which took place on the week-end of 27th and 28th November. We were blessed with excellent weather, particularly on the Sunday,

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and a great crowd attended that day as a result.

Success at this function was due to many, but I single out the following for outstanding service: Dave ZTAS organised the supply of tx's for the various bands for the exercise on the Sunday; Geoff ZTAS did more than his share, both in bringing the supply of tx's, helping in its erection, and afterwards in its dismantling, and in the general necessary but not an obvious job needing to be performed in between; Max TMX was a genial leader for the children's activities during the Sunday.

Mobile operation during, before and after the Hamfest was most pronounced. We know that about 40 mobile stations were heard. The 6 mc mobiles predominated, but 80 and 2 mc mobiles were also present.

On behalf of the Division, I convey the best wishes of all of us to Dave VKTZA and Mrs. Berry upon the celebration of their marriage on 20th November, and we wish them every happiness for the wonderful years to come.

I wish to bring before all members the fact that three members of Council have indicated that they will not be seeking re-election at the next Council elections in March 1966. If you feel you have things to play in the administration of our Division, then it looks as though the opportunity to serve your fellow Amateurs is almost at hand.

Finally, I apologise for the notes being written by me, but Geoff ZTAS has been far too busy in business and Divisional affairs to pen these notes for this issue. Bob 73 and good hunting during the holiday season, Ian TZZ.



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